

AN INVESTIGATION  
INTO THE  
VALIDITY AND CLINICAL USEFULNESS  
OF THE  
FIVE - ELEMENT RANK ORDER REPERTORY GRID  
WITH  
CHILDREN

THESIS SUBMITTED TO THE DEPARTMENT OF PSYCHOLOGY,  
UNIVERSITY OF CAPE TOWN, IN PARTIAL FULFILMENT  
OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE IN CLINICAL PSYCHOLOGY.

WESSEL CORNELIUS SWART, B.A. HONOURS

DECEMBER, 1974.

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## ABSTRACT

The main objective of this project was to investigate some aspects of the diagnostic and prognostic validity of the five-element rank order repertory grid (REP 5). This has been attempted at various levels of analysis with 48 nocturnal enuretic boys, aged 8 to 14, undergoing highly standardized hypnotherapy. REP 5, with neutral elements (photographs) and supplied constructs, was administered 5 times over an 8 month period, i.e. at the pretherapy; mid-therapy; end-therapy; 6 week and the 6 month follow-up stages. Each subject acted as his own control and in addition a nontreatment control group awaiting similar therapy was used. On the basis of current theory and relevant adult research findings, certain hypotheses were formulated to assess the validity of REP 5. This provided a framework within which the task was to determine whether REP 5 could register

(a) in a predictable and meaningful way the expected relationships between the relevant variables; and

(b) changes in these relationships.

The grid performances were also validated against an empirical criterion which was objectively measurable, i.e., nights dry. Results indicated that the REP 5 was reasonably effective in registering in a meaningful way the status and changes in variables during and after therapy. It appeared that the REP 5 has a significant diagnostic and prognostic utility value. Its efficacy as an instrument seems to be mainly limited by the ability of its designer to match the test design with the purposes for which it was intended.

### A C K N O W L E D G E M E N T S

I would like to express my sincerest gratitude to my Supervisor, Dr. H.I.J. van der Spuy, for the inspiration and guidance he provided and which made this project possible, to Steve Edwards, who performed the hypnotherapy, to Dr. P. Slater for making his Ingrid 69 available, to Lester Gilbert for his aid, instruction and advice with the computer programming and statistics in this project, and to Mrs. E.M. Roberts and Miss L. Graham for typing the manuscript.

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## SUMMARY

### Introduction:

One of the fundamental problems in psychotherapy research is that of measuring the changes taking place during therapy. It is generally reported that repertory grid technique may have more potential than most methods in measuring ideographic characteristics and dynamic change. Although this instrument is claimed to be versatile, relatively little research has been done to evaluate its validity, in particular with children.

The main aim of the present study was to investigate the diagnostic and prognostic validity of the five-element rank order repertory grid, REP 5, (Van der Spuy et al, 1972) with nocturnal enuretic boys undergoing highly standardized hypnotherapy.

From the relevant theories and research findings certain hypothesis were derived. Certain additional empirical hypotheses were devised to relate certain aspects of grids against empirical criteria, like dry nights. The aim was to see whether REP 5 could meaningfully reflect changes which could reasonably be expected, given the knowledge derived from the abovementioned areas, i.e., theory; research and the status of the external criterion.

The hypotheses which provided the main tool for the validation process are the following:

- (1) There will be a significant "loosening" of grids during therapy.
- (2) There will be a significant relationship between favourable outcome and loosening of grids during therapy.
- (3) The discrepancy between self and ideal-self will decrease after

successful/.....

successful therapy.

- (4) There will be a negative correlation between self-ideal-self discrepancy and successful outcome.
- (5) The grid will validly identify the existence of symptoms in the subjects.
- (6) The more the subject is willing to accept his enuresis the greater the likelihood of improvement will be. (Denial).
- (7) The more the subject identifies ideal-self with the positive pole of the enuretic construct (i.e. see himself ideally as dry) the greater the likelihood of his improvement. (Motivation).
- (8) The larger the discrepancy between his self-image as an enuretic and his ideal-self-image as an enuretic, the better the prognosis will be.
- (9) The "wetter" the subject the larger the discrepancy between the self-enuresis correlation and the ideal-enuresis correlation will be.
- (10) There will be a significant change in the relationship between the self-construct and other constructs over the first and last testing occasions. This change will be in the direction of improvement.
- (11) There will be no relationship between intelligence and any of the variables explored.
- (12) There will be no relationship between age and any of the variables explored.

#### METHOD

48 male nocturnal enuretics (24 primary and 24 secondary) aged 8 to 14, were controlled for age and randomly assigned to the treatment and non-

treatment/.....



treatment conditions. Improvement and change were assessed by

- (1) comparing the subjects to their own pre-therapy baseline ( $n = 36$ ), and
- (2) by comparing them with 12 waiting list controls, the nontreatment group.

The treated subjects were treated with highly standardized procedures for hypnotherapy.

All subjects were tested just prior to beginning therapy, in the middle of therapy, at the closing of the therapeutic sessions, at a six week follow-up and again at a 6 month follow-up with REP 5. The grid used was specially designed for these purposes. It consisted of 5 neutral elements (photographs) and 12 supplied constructs:

- |  |  |
|--|--|
| 1. Gets on well with mother                        | Gets on less well with mother                      |
| 2. Gets on well with father                        | Gets on less well with father                      |
| 3. Gets cross easily                               | Does not get cross easily                          |
| 4. Is worried                                      | Is not worried                                     |
| 5. Is happy  | Is unhappy   |
| 6. Liked by other children and<br>has many friends | Is not liked and has<br>few friends                |
| 7. Gives up easily                                 | Does not give up easily                            |
| 8. Thinks he can do better than<br>he is doing     | Thinks he can't do better                          |
| 9. Will be worried being from<br>father and mother | Least worried being away<br>from mother and father |
| 10. Is like myself                                 | Is least like myself                               |
| 11. Is as I would like to be                       | Is least like I would like<br>to be                |
| 12. Is most likely to wet his bed                  | Is least likely to wet                             |

Calendars/.....

Calendars noting "dry nights" were held by all parents over the entire period.

#### RESULTS AND CONCLUSION

The results indicated that the REP 5 was reasonably effective in registering in a meaningful way the status at testing and changes during and after therapy.

Hypothesis-testing in order to evaluate the grid against the external criterion (dry nights); theory and current research findings, yielded the following results:

No significant "loosening" of grids took place as predicted. It appears that the "loosening" of grids is not imperative for improvement to occur with nocturnal enuretics undergoing hypnotherapy. It was concluded that type of therapy may determine whether loosening takes place. Repetitive testing using the same REP 5 format did not result in a significant tightening of the later grids in the series. In fact these grids showed a remarkable reliability, when changes in the level of intercorrelations over the series of grids is considered.

This finding challenges the explanation that the mere act of repeatedly completing the grid forms may lead to tightening (Bannister and Fransella, 1971).

Increases in age ( $p < .05$ ) and intelligence ( $p .05$ ) showed increases in the tightening of these REP 5s. In adult research this tendency has not been found to exist (Fransella and Bannister, 1967).

The self-ideal discrepancy when measured before therapy with REP 5 was prognostic of outcome. ( $p < .005$ ). Those subjects who experienced larger initial self-ideal discrepancies improved most. No significant

decrease/.....

decrease was found in the self-ideal discrepancy as a function of improvement. However, the nontreatment control subjects showed the most spontaneous improvement for those subjects who had the smaller initial self-ideal discrepancies ( $p < .005$ ). Thus for subjects undergoing hypnotherapy for nocturnal enuresis, an initially relatively large self-ideal discrepancy in grid terms, appears to prognosticate favourable outcome. From the diagnostic point the grid appeared to reflect the self-ideal relationship and its interaction with improvement in a meaningful way.

It is diagnostically interesting that the grid could validly identify the existence of the enuresis symptom during therapy ( $p < .05$ ). This points at the potential value of using REP 5 for ongoing diagnosis during therapy, to assist with the evaluation of the efficacy of therapy and to assist with further planning. The fact that REP 5 only takes a few minutes to administer and has a seemingly remarkable stability, further recommends it for these purposes.

The evidence suggests that it was not necessary for the subjects to accept their enuresis in order to improve under hypnotherapy. Further support for the diagnostic validity is that the grid validly reflected a change in the status of the symptom. At the end of therapy ( $p < .05$ ) and at the 6 week follow-up ( $p < .025$ ) those subjects who improved most also saw themselves as "least likely to wet (their) beds". The grid also differentiated in a dynamically meaningful way between subjects who tended to deny and subjects who tended to accept their enuresis. At the end of therapy those subjects who were dry more often admitted their enuresis comparatively to a greater degree ( $p < .02$ ).

No relationship was registered during therapy between ideal enuretic

status/.....

status and improvement. At the end of therapy ( $p < .005$ ) REP 5 protocols indicated that subjects who improved most also saw their ideal as comparatively less likely to wet his bed. REP 5 differentiated further and indicated that those subjects who were initially wettest saw ideal as comparatively less likely to wet his bed, at the end of therapy ( $p < .01$ ). Presumably this is so because those subjects who were initially the wettest also improved most ( $p < .01$ ). Therefore, they also had the most optimistic view of the ideal enuretic status at the end of therapy. This again indicates the diagnostic sensitivity of the grid to meaningfully assess changes of importance for ongoing evaluation during therapy.

When the relationship of the discrepancy between self seen as an enuretic is explored, REP 5 registered meaningful results. Those subjects who were initially wettest eventually improved the most ( $p < .01$ ). Those subjects who improved most also tended to have smaller discrepancies between how the self and ideal were viewed as enuretics ( $p < .005$ ).

No significant changes in the relationship between self and other constructs were manifested. This finding is congruent with the statement by Lovibond (1971) that in some cases enuresis can be seen "not as a symptom of emotional disturbance but as a failure to develop adequate cortical control over subcortical mechanisms". Consequently one would not expect profound changes in construct relationships to be necessary before improvement becomes possible. These results were consistent with available theory and research findings regarding mainly enuretics. Thus they provide further evidence for REP 5's ability to register meaningfully changes or lack of changes in the subjects construct system.

Support/.....

Support was found for the findings in adult research, that age under 60 and I.Q. over 80 do not influence basic grid scores.

In conclusion, this REP 5 appeared to have reasonable validity when it was evaluated at different levels against

- (i) external criteria (dry nights)
- (ii) relevant theory and research findings
- (iii) against what is meaningful at a dynamic and rational level.

It appears that the time at which testing was done is important.

That is, in order to validate the REP 5 one has to be pretty sure that what you intend to measure is existent at the time. For example, subjects may only reflect their symptoms on the grid once they have accepted the existence of these symptoms.

Thus REP 5 appears to be of promising diagnostic and prognostic utility when it is designed on the basis of available and relevant theory, research findings and when its supplied constructs are worded in the least ambiguous way.

In the final instance, REP 5 cannot be better than is allowed by the limitations of its design (selection of constructs), and the available theory and research which in many instances may influence the selection of "relevant" constructs.

## Introduction

This project is an attempt to facilitate the process dictated by the current Zeitgeist of evaluating the effectiveness of psychotherapy by evaluating the effectiveness of the simplified rank order repertory grid (Van der Spuy et al, 1972) as an instrument to measure change in psychotherapy with children. One of the fundamental problems in psychotherapy research is that of measuring the changes taking place during therapy. From the review of some studies (mentioned below) it is suggested that repertory grid technique may have more potential than most methods in measuring ideographic characteristics and dynamic change.

### 1.1 Personal Construct Theory

George Kelly's personality theory of personal constructs is one of the most recent personality theories we have. (Bisschof, 1970). His major theoretical formulations grew out of his experiences as a therapist. Repertory grid technique is one of the practical methods derived from the Personal Construct Theory (George Kelly, 1955; 1963; 1965 ). Much of the interest in Kelly's personal constructs has been aroused through the use of his test, Role Construct Repertory Test, in short called REP test.

One may gain some idea of what Kelly is trying to do from the following quotations (out of context):

"Viewed in the perspective of the centuries, man might be seen as an incipient scientist and .... each individual man formulates in his own way constructs through which he views the world of events .... We assume that all our present interpretations of the Universe are subject to revision or replacement .... We take the stand that there are always some alternative constructions available to choose from in dealing with the

world/.....

world. No one needs to paint himself into a corner, no one needs to be completely hemmed in by circumstances; no one needs to be the victim of his biography .... We call this philosophical position constructive alternativism .... A person is not necessarily articulated about the construction he places on his world .... We insist that man can erect his own alternative approaches to reality" (A Theory of Personality, Kelly, 1963a).

Bannister and Mair (1968) and Bannister and Fransella (1971) gave an excellent exposition of Personal Construct Theory. The following are some basic assumptions and important aspects of the theory:

- (a) In the first instance Personal Construct Theory is presented as a complete, formally stated theory. This is unusual in psychology, where theories tend to be stalactitic growths, which accumulated over the years (often with later accumulations contradicting earlier ones). Construct Theory was put forward in a complete, elaborate and formal statement by one man at one time (Kelly, 1955). Although experiments, arguments and interpretations have built up around the Theory, it is still possible to state its central tenets in an orderly and complete fashion.
- (b) In the second instance the theory is reflexive - personal constructs theory is an act of construing which is accounted for by Personal Construct Theory.
- (c) Thirdly, construct theory was deliberately stated in very abstract terms to avoid, as far as possible, the limitations of a particular time and culture. In this respect Personal Construct Theory and its application may be of particular significance for the rich heterogeneity of the South African

Cultural/.....

Cultural set-up. Take for instance, the case of cultural changes as a function for "modernisation"/"industrialization" e.g. du Preez and Ward (1970) did a study to discover how modernization affects the way in which Xhosa men construe themselves.

(d) The theory does not have its philosophical assumptions buried deep inside it, it has them explicitly stated. Kelly gave the label of "constructive alternativism" to these philosophical assumptions and argued them at length. (More fully discussed below). In contrasting his approach with that of the Freudians (you are the victim of your infancy) and behaviourists (you are the victim of your reinforcement schedules), Kelly argued that man is not the victim of his autobiography though he may enslave himself by adhering to an unalterable view of what his past means, thereby fixates his present.

Bannister and Mair (1968) quote Kelly, from his unpublished "Brief Introduction to Personal Construct Theory" of 1966:

"Like other theories, the psychology of personal constructs is the implementation of a philosophical assumption. In this case the assumption is that whatever nature may be, or howsoever the quest for truth will turn out in the end, the events we face today are subject to as great a variety of constructions as our wits will enable us to contrive. This is not to say that one construction is as good as any other, nor is it to deny that at some infinite point in time human vision will behold reality out to the utmost reaches of existence. But it does remind us that all our present perceptions are open to question and reconsideration, and it does broadly suggest that even the most obvious occurrences of everyday life might appear utterly transformed if we were inventive enough to

construe/.....



construe them differently".

Kelly claims that "constructive alternativism", and its implications, keep cropping up in the psychology of personal constructs. He contrasts it with what he calls the prevalent epistemological assumption of "accumulative fragmentalism", which is that truth is accumulated piece by piece. "While constructive alternativism does not argue against the collection of information, neither does it measure truth by the size of the collection. Indeed it leads one to regard a large accumulation of facts as an open invitation to some far-reaching reconstruction which will reduce them to a mass of trivialities"

(e) An important point about Kelly's Theory is its assumption that man and other animals are, by definition, active.

In Kelly's own words (1963)

"Instead of buying the prior assumption of an inert object, either on an implicit or explicit basis, we propose to postulate a process as the point of departure for the formulation of a psychological theory. Thus the whole controversy as to what prods an inert organism is delivered fresh into the psychological world alive and struggling".

The direction of movement is postulated to be in the direction of increased meaning for an individual according to his own personal terms. From this standpoint (mentioned above) Kelly rejects 'hydraulic' theories of man - theories which postulate some 'force' (motive, instinct, drive) within man, impelling him to movement. He argues (Kelly, 1962) that it is entirely unnecessary to account for movement in a theory which makes move-

ment/.....

ment its central assumption. Thus he says: "Suppose we began by assuming that the fundamental thing about life is that it goes on; the going on is the thing itself. It isn't that motives make a man come alert and do things; his alertness is an aspect of his being".

(f) Kelly is essentially not proposing Personal Construct Theory as a contradiction of other psychological theories, but as an alternative to them - an alternative which does not deny the 'truths' of other theories, but which may provide more interesting, more inspiring and more elaborative 'truths' (Bannister and Fransella (1971)). It can be noted that there are many similarities between Kelly's theory and the existential approach in psychology: Existential psychology (in Europe) viewed itself as a new orientation or as a new perspective, essentially ideographic, as opposed to the nomothetic tendencies of other forms of psychology. Its intention has not been to abolish the existing tendencies and approaches of modern psychology but to complement them by introducing another viewpoint and new themes and methods which were either missing altogether in traditional psychology or up to now had not been given sufficient attention.

(g) An important assumption of Kelly is that events internal to a person are taken to be as "real" as external events. Bannister and Mair (1968) write:

"The theory, then is one which avoids the groundlessness and subjectivity of the purely phenomenological or existential approaches, by seeing man as testing out his interpretations or constructions for their adequacy in predicting the world which he is gradually coming to know.

Furthermore, it is accepting that a man's thoughts are as

real/.....

real as any other events in the Universe, he emphasises his conviction that a viable and useful psychology of man can be built without recourse to underpinning insurance which many psychologists seek in the supposedly more substantial events handled by the physiologist, neurologist, or bio-chemist".

(h) A further assumption is that the internal universe as well as the external is seen as explicable only in terms of the dimensions of time, thus emphasising that an individual's actions are related to the future, as much as to the past and present. An individual is seen as continually striving to refine his system of construing to enable him to make better predictions of future events.

(i) Another basic assumption is that the internal and external universes are integral, and thus an individual's constructs (his way of construing) are inter-related and, to a greater or lesser degree, coherent. There is always a pressure to integrate and make coherent the representations an individual makes of his environment. All interpretations tend to be reviewed and refined.

(j) It has already been implied above that Kelly's work seems to stand with its one foot in the phenomenological, subjective world and its other foot in the scientific world. Kelly certainly pointed out that despite the emphasis on personal ideographic data, higher order abstraction could lead to generalisations about populations, and thus place the ideographic data in a nomothetic framework. It may be that techniques derived from Kelly's work will assist in and possibly quantify many of the "existential" observations and make it easier to communicate this type of data, than is currently possible.

#### 1.2.1 Criticisms/.....

### 1.2.1 Criticisms of Personal Construct Theory

Two well-known psychologists (Bruner and Rogers) seem to be ambivalent about Kelly's work, particularly in a review of his 1955 book, "The Psychology of Personal Constructs", "Critics of Kelly feel he has placed too great an emphasis upon cognition" (Southwell and Merbaum 1964). In Jerome S. Bruner's view, Kelly's theory is inadequate because it ignores man's emotions in order to do full justice to man's intellect. Carl R. Roger's criticism addresses itself to the method of psychotherapy that Kelly derives from his personality theory. Rogers also takes Kelly to task for his exclusive emphasis on intellect but mainly "deplores the lack of attention paid to the emotional relationship between the therapist and the patient". However, despite these comments, we find that "These excellent, original and infuriating prolix two volumes easily nominate themselves for the distinction of being the single greatest contribution of the past decade to the theory of personality function. Professor Kelly has written a major work" (Southwell and Merbaum, 1964).

### 1.2.2 Reply to some of the criticisms

Regarding the common charge against Personal Construct Theory (e.g. Brunner, 1956) that it is too "mentalistic", Bannister and Fransella (1971) give the following reply:

"Kelly did not accept the cognition-emotion division as intrinsically valid. It is a jargon descendant of the ancient dualities of reason versus passion, mind versus body, flesh versus spirit which has led to dualist psychologies. Construct Theory is an attempt to talk about men in a unitary language .... we may find that we can do more without the cognition-emotion distinction than we have been able to do with it. Kelly seeks to deal with the kind

of/.....

of problems which are, in both common sense psychology and most modern psychology, dealt with in terms of the concept of 'emotion' or 'drive' or 'motivation', but he tries to remain within the general framework of his own theory and not have recourse to extraneous concepts."

To avoid this dualism Kelly focuses our attention on certain specific constructs, namely anxiety, hostility, guilt, threat, fear and aggression, but defines them all as "awareness" that construct systems are in transitional states. That is, for example, an anxious person is a person who is aware that the events with which he is confronted lie mostly outside the range of convenience of his construct system.

Anxiety is not seen as a separate factor, a permanent trait of a certain intensity inside, but as a state of awareness.

Thus Kelly uses some of the terms originally used to denote "emotion" (guilt, hostility etc.) to refer to construct systems which are in a state of transition, or more specifically, to refer to the awareness on the part of the individual that his construct system is undergoing, or is on the verge of, change. (There might be a marked lowering of serial retest coefficients in individuals who are overtly undergoing a constructional change process e.g. patients in psychotherapy or people in stress situations.)

#### 1.3.1. The Repertory Grid Technique

The repertory grid technique aims to discover the constructs with which the person construes the world around him, to elucidate the manner in which the constructs are used, and to unravel the complexities of the relationships between constructs. For the purposes of the grid, the world of the subject is represented by the elements, which can be the most important people in the life of a given person. The elements can, however, be any person, thing or idea that can be con-

strued/.....

strued in any way e.g. brands of ice cream, ideals of people, photographs or anonymous people, and so on. The elements are chosen to fit in with the purpose of the grid and to fit within the range of convenience or applicability of the construct used. Kelly emphasised that the range of convenience must always be kept in mind.

The various forms of the repertory grid technique, summarised by Bannister, 1962, originated from the one proposed by Kelly (1955), are an integral part of the development of Personal Construct Theory.

Essentially the repertory grid is a form of sorting test. Repertory grids differ from conventional sorting tests in that there are no standard sorting materials or sorting categories nor is there any standard single form of administration or scoring procedure.

In its original form the technique was called the Role Construct Repertory Test, and the individual was asked to name twenty to thirty people he knew who fitted different role titles, such as 'mother', 'person you admire', 'former boyfriend', and these were called elements. Constructs were then elicited by selecting three of these elements and asking the patient in what important way two of the people were alike and thereby different from the third. Examples of these descriptions are 'intelligent', 'kind', and 'handsome' (Bannister and Mair, 1968). Construct theory assumes that constructs are bipolar, even though the person was not aware that he was functioning in this way. In other words, describing a person as 'kind' assumes that someone else is not kind, or 'unkind'. The grid technique takes advantage of this by assuming a polar opposite for each elicited construct. It was from the relationships between the constructs that the clinician hoped to gain some insight into the way the person construed his microcosm.

### 1.3.2. The/.....

### 1.3.2. The Common Characteristics of all Forms of Repertory Grid Techniques

All forms have certain characteristics in common:

- (a) The central aim is to reveal the construct patterning for a person and not to relate this patterning to some established normative data (though normative data may prove useful for some specific purpose).
- (b) There is no fixed form or content. The selection of form and construct is related to each particular purpose.
- (c) What is measured is the relationship between sorting categories (construct, concepts, ideas) for the subject - not the "correctness" of the sorts as such.
- (d) They are so designed that statistical tests of significance can be applied to the performance of the single subject.

Underlying all forms of repertory grid examination is the assumption that the psychological relationship between any two constructs for a given subject is reflected in the statistical association between them when they are used as categories in a sorting task. (Bannister, 1965).

Almost invariably repertory grid technique has been used as a method of examining the individual's view of his inter-personal world and has been used largely in clinical contexts.

### 1.3.3. The Advantages of Grid Technique and Current Research

The general advantages of grid technique may be seen as the following:

Grid technique is an oblique mode of examination in that what is being measured is not what the subject imagines is being measured: usually subjects suspect that their actual judgment of each element within the sorting task is measured, when in fact what is being measured is/.....

is the relationship between their judgmental categories. (Bannister and Mair, 1968).

A consequence of this is that social desirability is unlikely to influence the final outcome.

Questionnaires, interviews and projective tests all tend to assume that the meanings which the person attaches to the verbal labels he uses, are approximately those which the investigator would attach to them. This is, of course, often an unwarranted assumption and it does not need to be made in grid testing in that the meaning of (i.e. relationships between) verbal labels for the subject is what is explicitly being examined. (Bannister, 1965, 1968).

Intelligence above I.Q. 80, age below 60 years and sex, seem to have no significant relationship to the basic grid scores. (Fransella and Bannister, 1967). The flexibility of the repertory grid technique enables the psychologist to explore in quantitative terms and with an explicit rationale, areas of personal conceptualization which are of great clinical interest but are difficult to examine by conventional methods. (Bannister, 1968, 1965).

Research concerned with the repertory grid as a "technique that provides a quantifiable test of hypothesis concerning data which are not readily measurable by more traditional standardized instruments (such as questionnaires)" (Caine and Smail, 1969) is providing valuable information as to the scope of grid applicability. Most rank-order repertory grids have the construct relationships analysed according to Spearman rhos.

Slater (1969), in a review of The Evaluation of Personal Constructs, reiterates the availability of computer programmes which analyse complex grids, thus avoiding the time involved in hand analysis.

Another/.....



Another advantage of grid technique is that, provided basic theoretical assumptions are borne in mind, the methodological flexibility allows it to be adapted and used in different ways:

One of the best known applications of the technique is the grid test of schizophrenic thought disorder described by Bannister and Fransella (1966). They used a simple standardized grid where the 8 elements consisted of 8 photographs of anonymous people (4 men and 4 women), and 6 standard constructs were "kind", "stupid", "selfish", "sincere", "mean" and "honest". During an interview the patient ranks all the elements in terms of each construct, and the rank order correlations are subsequently calculated. The degree to which the constructs in a grid are inter-correlated forms the "intensity score". (High correlations indicate high intensity, low correlations low intensity). This "intensity score" is related to Kelly's notion of 'tight' versus 'loose' construing. He considered that 'loosening' (lowering of the intensity score) had to occur before a new idea could be formed. The overall correlation between the two grids forms the "consistency score". Thought-disordered schizophrenics, when compared with other psychiatric subjects (including non-thought-disordered schizophrenics) and normal subjects, show a tendency to obtain low intensity and consistency scores. This tendency is marked enough to enable this grid to be used rather like a conventional psychometric test in quantifying a particular characteristic. The failure of thought-disordered schizophrenics to show substantial correlations between constructs, and their failure to maintain a specific pattern of inter-correlations in a second grid, suggests that their conceptual framework is overly loose and that their way of looking at their world are inconsistent and unstable.

Recently the repertory grid technique has been used clinically in mainly

single-subject/.....

single-subject or small sample studies. For example, Slater (1965), demonstrated the use of this technique in the individual case. Fransella and Adams (1966) used six consecutive grids to study a man who had committed several acts of arson, and demonstrated the flexibility, internal validity, test/retest reliability, and predictive potential of the method when used in a clinical setting. The grids supported the notions that the most important moment in the act of arson for this patient was between setting a match to the fire and flames blazing up; that "self" correlated negatively with arson constructs; that the act of putting a match to the fire correlated markedly positively with "good" qualities; and that the man saw himself as upright and responsible. The grid findings supported what seemed to be the author's reasonable conclusion that this particular man regarded arson as an "act of purification". What seems less justifiable is their generalisation that neurotic patients "very often have a zero or negative correlation between 'self' and constructs relating to their major symptoms as was the case with their patient. One would imagine that there is a very wide variation in the way self constructs and symptom constructs correlate in different patients.

Bannister and Mair (1968) relate the case of an agoraphobic woman who had 18 grids administered to her over a nine month's period of intensive psychotherapy and behaviour therapy. These grids were administered to investigate changes in the way which she viewed herself, her psychiatrist and her major symptom. At one point virtually all inter-correlations sank toward zero for 14 previously significantly related constructs and she simultaneously began to complain of being vague, confused and indulging in excessive daydreaming. "This might be viewed as indicating a loosening of her system for attaching meaning to her world, and as an opportunity for elaborating a new set of attitudes in the course of

psychotherapy/.....

psychotherapy. However, the type of psychotherapy being used was non-directive, and no specific pressure for a given viewpoint was applied. Perhaps because of this, she gradually re-established her original conceptual framework". (p 196). Although the initial and final grids were almost identical, considerable changes had been manifested during the intervening grids. This patient's clinical condition fluctuated markedly during treatment and eventually settled at a level of severe agoraphobia, identical with that which caused her admission.

Watson (1970 a, b,) describes a method by which the repertory grid is used to study groups. His procedure enables a comparative grid technique to examine interpersonal relationships and provide hypotheses about a group. It may also act to identify psychological features of individual group members as well as measure of change during therapy. Caine and Smail (1969) report a group study as a means of measuring stability of the grid technique. They argue that as the grid is designed to be an ideographic instrument, constructs may be understood in different ways by different people. Clinical validity and reliability is determinable if a known stable aspect of personality functioning is measured. They administered the Hysteroid/Obsessoid Questionnaire (Caine and Hope, 1967) and a grid containing hysteroid/obsessoid trait constructs to a group of normal subjects, and then again three months later.

Their results showed moderate degrees of validity and reliability of the grid for the characteristics under investigation. They conclude that the H.O.Q. is a better measuring instrument, but that the grid is still an indispensable tool when used with a single patient.

An investigation into conceptual process and pattern change in a psychotherapy group, N=8, suggest that the degree to which certain adult

patients/.....

patients and groups produce measurable change, by altering the relationships between constructs or by merely shuffling people along the construct dimensions, might prove to have some prognostic significance. (Fransella and Joyston-Bechal, 1971).

Measurement of conceptual change accompanying alterations in bodily process or structure was recorded, N=7 (Fransella, 1970).

Conceptual changes during recovery from anorexia nervosa were recorded by Crisp and Fransella (1972), over seven grid administrations, and showed how the construct systems of two patients were organized and ways in which they changed during the course of treatment. The authors expressed the hope that, "As further patients are studied it may become possible, using such measures, to identify factors which are predictive of outcome in the individual case, and which will help to focus psychotherapeutic efforts."

Landfield (1971) found, using grids, that therapists who used their patients' construing language were less likely to have them opt out of treatment (Bannister and Fransella, 1971).

The grid technique has been used experimentally, as a basis for therapy in marriage counselling with promising results. (Bannister and Fransella, 1971).

Du Preez and Ward (1972) found several differences in ways of construing between "modern" and "traditional" Xhosa. Members of the modern group showed greater homogeneity in construing themselves, using more permeable constructs which covered wider ranges of events, and had the self and ideal self more closely related than in the traditional group. The greater diversity of self-constructs in the traditional group is taken to imply that it is falling apart, and that there is low agreement about how

members/.....

members ought to see themselves, a conclusion which is formed by the low self-ideal-self correlations in this group.

The studies mentioned above hopefully illustrate the versatility and flexibility in the way the repertory grid technique has been applied recently.

#### 1.3.4 Personal Construct Theory, the Grid Technique and the Self-Concept

Construct theory differs from personality theories centred on the "self" in that the self is seen as a construct along with all other constructs, albeit a very important construct. Kelly introduces the idea of self like this:

"Let us turn our attention, more particularly, to the controlling effect one's constructs have upon himself. As we have pointed out before, the self is, considered in an appropriate context, a proper concept or construct. It refers to a group of events which are alike in a certain way and, in that same way, necessarily different from other events. The way in which the events are alike is the self. That also makes self an individual, differentiated from other individuals. The self, having been thus conceptualized, can now be used as a thing, a datum, or an item in the context of a superordinate construct.

When the person begins to use himself as a datum in forming constructs, exciting things begin to happen. He finds that the constructs he forms operate as rigorous controls upon his behaviour. His behaviour in relation to other people is particularly affected. Perhaps it would be better to say that his behaviour in comparison with other people is particularly affected. It is, of course, the comparison he sees or construes which affects his behaviour. Thus,

much/.....

much of his social life is controlled by the comparison he has come to see between himself and others". (Kelly, 1955, p 131).

It seems that Kelly is suggesting a distinction between self-as-a-construct and self-as-an-element which has an allotted place along other construct dimensions. This self-as-a-construct could be that "intuitive me-ness" or consciousness, that permeates all our life. The self-as-an-element is a series of specific distinctions which we make between ourselves and others in particular contexts - this is a datum which sits somewhere along many dimensions. The operational distinction between the two is explored by Mair (1967).

Bannister and Fransella (1971) consider as possible examples of this self-as-construct-self-as-element dichotomy "derealization", where self as a construct is alienated from its elements, retaining only awareness, and so is able to 'watch' the self as if it were an object, performing its own acts in terms of its own discriminations. Depersonalization they claim, can be viewed as the reverse of derealization in that the person feels that he is unreal although the world is real enough. If there are these two types of self, then the one that is being measured in repertory grids or other techniques is not the "uniqueness" aspect of self but some variant of the self-as-element along the person's construct dimensions. This idea would help to account for the observation that the construct "like me in character" can be one of the most unstable in measurement terms, in contrast to the ideal self-construct (like I'd like to be in character), which tends to be extremely stable over time, since the self can be viewed as an element which can be placed along many construct dimensions, it is not so surprising that in some contexts it sits on one set of dimensions and

in/.....

in other contexts on another set. A person can see himself as a stutterer in the context of talking to people but in more general contexts see himself as quite different from the group of stutterers, (Bannister and Fransella, 1971; Fransella, 1968).

Smail (1970) suggested that a person's choice of symptom could be related to how he sees himself in relation to others. It was found that people who give more "objective" constructs during the elicitation procedure of a repertory grid (such as male versus female; old versus young) are more likely to have somatic symptoms, whereas those producing more "psychological" constructs (such as easy-going versus strict, brash versus quiet) favour psychological symptoms.

Ryle and Breen (1972) predicted that an extreme view of self, ideal self, mother or father would be related to neurosis. (The measurement of extremity used was the product of the loading of the element on the component and the percentage of variance accounted for by the component; this was tested for the first two principal components). They found that:

1. Patients showed greater self-ideal self distance.
2. Patients of both sexes show greater self-father distance than controls (significant for sexes combined and for males alone).
3. Patients show significantly lower values for self-mother minus self-father distances.
4. The mean distance of self from mother and father is higher for patients than controls.
5. Patients/.....

5. Patients show more extreme loadings for self on their first two principal components than to controls.
6. Patients have more elements at a distance of 1 or over than do controls.

Two differences are in opposite direction to prediction at significant levels:

1. Patients choose significantly fewer elements of the same sex than controls.
2. The mean construct correlations between likely to succeed academically and a cold person was significantly lower in patients compared to controls. They conclude that these findings should add to the confidence with which repertory grid techniques are used in the clinical setting. Attention is drawn to the value of the personal construct model of neurosis:

"A personal construct model based upon the findings of the present study would describe the neurotic as someone who sees himself as unlike others in general and unlike his parents in particular, who is dissatisfied with himself, who tends to extreme judgements and operates with a less complex construct system than do normals, and who tends to construe others in ways which depart from consensual values in respect of certain attributes" (p 346).

(Several researchers using the Q-sort technique noted increases in self/ideal correlation from pre- to post-therapy as a function of "successful" therapy, and a greater stability was also noted for this correlation in follow-up. (Butler-Haigh, 1954; Ends and Page, 1959; Cartwright's re-analysis

in/.....



in 1956 of the 1955 Barron and Leary study). Schlien and Zimring (1970) felt that these results demonstrated outcome effects which appeared to have occurred as a consequence of therapy rather than a mere passage of time - "spontaneous remission").

Self-ideal correlation cannot be accepted in an unqualified way as an index of adjustment if we consider Loevinger's proposal. (Loevinger, 1966a; Loevinger & Ossurio, 1958). Loevinger proposed a personality trait which she defined as the capacity to conceptualize oneself or to "assume distance" from oneself and one's impulses. According to Loevinger, it is the manifestations of this trait in personality inventories that have been described in such terms as facade, test-taking defensiveness, social desirability, acquiescence and personal style. Loevinger suggested that ability to form a self-concept increases with age, education, and socio-economic level.

According to Loevinger, many (if not most) persons fail to reach the final stage of differentiated self-concept. Insofar as personality inventory responses are evaluated in terms of normative data, individuals whose self-concepts are at the stereotyped conventional stage, receive higher or "better adjusted" scores. In the course of psychotherapy, some persons may advance beyond this stage to the individualized self-concept and hence may show a deteriorated profile on adjustment inventories. (Loevinger and Ossurio, 1958). Such a hypothesis could account for the apparent failures of personality inventories when used in a clinical setting. For example: The findings by some investigators (Sanford, 1956) that when evaluated in terms of personality inventory norms, college seniors appear to have poorer emotional adjustment than

college/,.....

college freshmen, may have a similar explanation (Anastasi, 1968).

This question of defensiveness received considerable attention from Rogers and his associates (Hall and Lindzey, 1970) because it raises some serious problems regarding the validity of self-reports. Is it true, for example, that when a person says he is satisfied with himself he really is? Does the internal frame of reference give an accurate picture of personality?

Friedman's (1955) research indicated (using Q-sort) that the psychotic patients displayed considerably more self-esteem than did the neurotics and not a great deal less than the normal subjects. Friedman concludes that "to employ a high correlation between the self and ideal-self conceptions as a sole criterion of adjustment, however, would lead to the categorization of many maladjusted people, particularly paranoid schizophrenics, as adjusted" (p 73).

#### 1.3.5. Further Developments in Repertory Grid Technique

Levin (1972) made use of a "Defensiveness score" in administering the repertory grid, which seems to be a most ingenuous way of dealing with the problem of social desirability/defensiveness mentioned above. This defensiveness score was based on the degree to which the child complied with information about him known to be true. For example, for the maladjusted children the constructs were derived from information contained in their case histories as well as what was known clinically. Interestingly Levin's results suggested no difference between maladjusted and controls for L (defensiveness index) on either the J.E.P.I. or on the personal element grid. But on a neutral element grid the maladjusted children

score/.....

score higher than normal children. It seems that Levin's attempt to build in a "L"/defensiveness index is a further refinement of the grid technique which further enhances its applicability, as it may assist us to tell how "valid" a particular "self-report" is.

A further step in the analysis of grid data is the principal components analysis described by Slater (1965):

"The total dispersion is analysed into amounts due to variation in independent dimensions from the largest to the smallest. The contribution of each element and each construct to the variation in each dimension is given by element loadings and construct loadings. The loadings can also be used for making maps to show the geometrical counterpart of the numerical entries in the grid - for often the implications of the observations are more evident when they are viewed as a whole in their geometrical forms".

Such maps showing the distribution of elements in the space of two components (usually the first two) were used by Fransella and Adams (1966) in their first study of the man who committed arson, and by Rule (1967) and Ryle and Lunghi (1969). In the second paper Ryle and Lunghi describe the brief analytically orientated psychotherapy of a young woman, who completed the same grid at the start and finish of treatment, and half-way through. From the initial clinical psychodynamic formulation predictions were made about the specific changes in element distances and construct correlations that would be seen if "improvement" occurred. At the end of treatment

dynamic/.....

dynamic improvement was thought to have occurred, and the grid changes were in the predicted direction in all but two instances. (Testing such predictions may be a valuable way of attempting to validate the use of grid technique in quantifying psycho-dynamic change. But perhaps one should bear in mind the dangers of the self-fulfilling prophecy (Merton, 1948). The analysis of the data obtained in repertory grids has been enormously assisted by the M.R.C. Service for analysing repertory grids, under Dr. Patric Slater. He has written a number of computer programmes to carry out the analyses, including Ingrid 67 (Slater, 1967) and Delta (Slater, 1968). The former programme calculates the mean scores of constructs, the variation about the mean of each construct, the sum of the variations, the correlations between all the constructs, and the distances between all the elements. A principal component analysis is then carried out, and the loadings of the constructs and elements on the most important components (usually the first three) is printed out. The loadings enable one to map out either the elements or constructs in the component space.

The Delta programme compares two grids, which must have the same elements and constructs (at least nominally) for the comparison to be effected. The changes between the grids are thus clarified, the correlations between constructs on the two occasions being calculated, for example. The Delta programme enables a whole series of grids to be combined by extending the elements, and thereby changes in the element positions from occasion to occasion (of testing) are shown. The Prefan programme does the same sort of

thing/.....

thing but by extending the constructs, so that changes in constructs from occasion to occasion are shown.

Ravenette (1965, 1968a, 1969, 1972) has pioneered the use of the repertory grid with children. He pointed out that techniques used with adults can usually not just be applied to children: the number of elements have firstly been reduced to 8 to make the task intellectually easier for younger children.

Van der Spuy et al (1972), using a sample of forty-six children, aged 9 - 15, demonstrated that a five element rank order repertory grid was highly comparable to that of an eight element rank order repertory grid. The number of elements were reduced to make the discriminations between elements intellectually easier for children.

Levin (1972) did "a study to determine the degree to which the Junior Eysenck Personality Inventory and Kelly Repertory Grid Accurately Identify Maladjusted Children". He confirmed his central hypothesis namely "that there would be an overall agreement between the two instruments in their identification of the maladjusted child".

In summary, it seems that the repertory grid technique has tremendous clinical usefulness. But much research appears to be needed to evaluate further the multitude of uses already suggested.

## 2.0 AIM

To investigate the diagnostic and prognostic validity of the five-element rank order repertory grid at various levels of analysis, with children undergoing psychotherapy in a child guidance clinic.

### Main Hypotheses

1. There will be a significant "loosening of the grids" during therapy. Loosening of a grid refers to a lowering of the inter-correlations between constructs.
2. There will be a significant relationship between favourable outcome and loosening of grids during therapy.

The rationale behind the above hypotheses is that those patients who undergo a re-examination and re-organization of their construct system during therapy are more likely to benefit. It is suggested that such re-organisation will be reflected by a loosening of the grid. This does not rule out a tightening of the grid as new values and insights fall into place as was suggested above. (Bannister and Mair, 1968).

3. The discrepancy between self and ideal-self will decrease after successful therapy. (See Introduction 1.3.4).
4. There will be a negative correlation between self-ideal-self discrepancy and successful outcome. (See Introduction 1.3.4).
5. The grid will validly identify the existence of symptoms in the subjects. As will be seen further on, all of the subjects suffered from enuresis, and it will, therefore, be possible to ascertain to what extent their grids reflect this known fact. The degree to which the self construct (construct 10) correlates with the construct indicating enuresis (construct 12) will be taken as the measure in which the grid validly identifies the existence of this known symptom.

6. The/.....

6. The more the subject is willing to accept his enuresis the greater the likelihood of his improvement will be. Denial of symptom is hypothesised not to be conducive to therapeutic improvement.
7. The more the subject identifies ideal-self with the enuretic construct (construct 12 i.e. see himself ideally as dry) the greater the likelihood of his improvement. This will be taken as an index of his motivation to become non-enuretic.
8. The larger the discrepancy between his self-image as an enuretic and his ideal self-image as an enuretic the better the prognosis will be. The index of this will be the difference between the correlation of the self construct (10) with the enuresis construct (12) and the correlation of the ideal-self construct (11) with the enuresis construct.
9. The wetter the subject the larger the discrepancy between self-enuresis correlation and the ideal-enuresis correlation will be.
10. (a) There will be a significant change in the relationship between the self construct (10) and other constructs over the initial (T1) and final (T5) testing occasion.  
(b) The change will be in the direction of improvement.  
It was felt that in particular the relationship between self construct and other constructs will be influenced by therapeutic intervention.
11. There will be no relationship between intelligence and any of the variables explored. The latter refers to the variables covered in hypothesis 1 to 10.  
Intelligence above I.Q. 80 seem to have no significant relationship to basic grid scores. (Fransella and Bannister, 1967).
12. There will be no significant relationship between age and any of the variables explored in hypotheses 1 to 10.  
Ages below 60 seem to have no significant relationship to the basic grid scores. (Fransella and Bannister, 1967).

## METHOD

### 3.1 Subjects

The subjects were 48 nocturnal enuretic boys, 24 primary and 24 secondary enuretics, undergoing hypnotherapy for their enuresis at the U.C.T. Child Guidance Clinic. Age range 8 - 14.

Subjects were classified as secondary enuretics.

if they had been "dry" for a minimum period of 3 months; or  
if they had been "dry" one or two months at any time during  
their lifespan.

Subjects not satisfying these criteria were classified as primary enuretics.

The subjects either had a medical examination or were medically referred to eliminate cases with organic involvement.

The subjects were selected from the respondents to a letter which was distributed to the largest boys' schools in the Cape Peninsula offering treatment for nocturnal enuresis in boys.

### 3.2 Apparatus

#### 1. Psychological tests:

- (a) The Five Element Rank Order Repertory Grid, a recent modification introduced by van der Spuy et al (1972) was used. This Five Element Rank Order Repertory Grid simplifies the administration of the grid for younger children by: making it "intellectually less taxing", reducing time of administration and calculations.

Van der Spuy et al compared the five to the eight element rank order repertory grid and concluded that they are highly comparable.

As elements were used photographs of children of the same sex as the subject.

Twelve constructs were provided and were as follows:

1. Gets/.....



1. Gets on well with mother	Gets on less well with mother
2. Gets on well with father	Gets on less well with father
3. Gets cross easily	Does not get cross easily
4. Is worried	Is not worried
5. Is happy	Is unhappy
6. Liked by other children and has many friends	Is not liked and has few friends
7. Gives up easily	Does not give up easily
8. Thinks he can do better than he is doing	Thinks he can't do better
9. Will be worried being from father and mother	Least worried being away from mother and father
10. Is like myself	Is least like myself
11. Is as I would like to be	Is least like I would like to be
12. Is most likely to wet his bed	Is least likely to wet

For three of the constructs positive and negative poles have been reversed (See grid application form in appendix).

Constructs 10, 11, 12 were placed low in the hierarchy because it was hoped that by this time the subject would have more "firmly" identified with a particular photograph and will thus provide a better self-ideal construct relations. Construct 12 was put last on the list of constructs because it was felt that because of its emotional loading it may affect any later choices, had it been higher on the hierarchy.

With constructs 1, 2 and 6 it was hoped to tap familial and peer relationships.

Construct 12, when correlated with the known symptom of nocturnal enuresis will provide some index of "defensiveness". That is the extent to

which/.....

which the element (photograph) which has been chosen to be "myself as I am" will correlate with "is most likely to wet his bed" and the known number of dry nights.

A general index of maladjustment may be derived from the grid for correlations of "self as I am" with the predominantly negative poles of those constructs reflecting emotional adjustment. This index of maladjustment may reflect to what extent the nocturnal enuresis is a symptom of underlying maladjustment. Presumably the higher the score on this index the greater the probability of underlying "pathology" the lesser change of "symptom" removal may be. (That is if nocturnal enuresis is seen as symptom rather than for instance a reflection in delayed maturation.)

(b) Strict daily recording of enuresis was done by parents on calendars provided monthly for this purpose.

(c) The therapist used a high fidelity stereophonic reel to reel tape recorder to achieve a high degree of standardization in his therapeutic programme across subjects and sessions, that is, for hypnotic induction and suggestions given to all subjects.

These "standardized" pre-recorded suggestions aimed at decreasing both enuresis and maladjustment in subjects.

These suggestions:

(a) were based partly on a treatment regime propounded by Hartland (1971);

(b) attempted to incorporate various factors associated with nocturnal enuresis, (e.g. increased bladder strength, i.e. ability to hold "water");

(c) were/.....

- (c) were geared towards reinforcement of positive behavioural changes as advocated by Meyer and Tilker (1969), specifically through "post-hypnotic" suggestions associated with dry nights (e.g. ".... you will become calmer .... less worried .... less anxious .... feel more confidence in yourself .... more independant").

### 3.3 Design

The 24 primary and 24 secondary enuretic subjects were graded in terms of age, eldest to youngest in each case; cut-off points established at quadratic intervals and randomly assigned to one of the treatment conditions. Further information and details regarding this study do not fall within the field of this particular project.

Improvement was assessed in two ways:

- (i) As compared with their own baseline wetting frequency prior to treatment;
- (ii) As compared to a non-treated control group.

Bergin (1971) after an extensive review of the methodological problems in therapy outcome research made the following recommendations (summarized):

- (1) (a) Researchers and therapists should consider specific change rather than general multiform change.
- (b) A correlated activity would be the more rigorous and extensive development of measures for tapping different kinds of change.
- (c) More rigorous specification of the variables underlying clients and therapists.

(2) "Since/.....

- (2) "Since 'internal' and 'external' criteria measure different human characteristics, since these characteristics are significant, since changes occur in both domains during therapy, and since important decisions regarding the value of different techniques continue to be based on the extent of change induced by them, we recommend that future studies include representative measures derived from this dichotomy."
- (3) (a) The use of specific rather than global improvement indices is mentioned. Thus, if a person seeks help for severe depression, we would tend to measure change in depression rather than his global psychological status.
- (b) Different standardized measures might be used for different cases, depending on the type of change sought.
- (c) Unique criteria could be devised for each client. This might entail the use of self-descriptive items in an ideographic Q-sort which would still permit the calculation of self-ideal correlations and other computations, or it could depend on brief self descriptions, which are utilized and rated.
- (4) Adequate outcome measurement in psychotherapy is dependant upon the scientific status of personality measurement in general.
- (5) Schlien et al (1970) suggests that each person should be made his own control. "Then he is perfectly matched for himself. This is possible if, for example, you ask half your sample who apply for therapy to take your tests and wait for a period before beginning therapy."
- (6) Schlien et al (1970) feels that replication studies are too rarely done in clinical research.

The/.....

The current study of which this project is a part accommodates some of the recommendations mentioned above in the following way:

Therapy is defined, outcome is defined, one therapist is used, therapeutic interaction is highly standardized which will make replication easier, specific rather than general multiform change is measured and predicted; a tool for measuring different kinds of change is being evaluated; client and therapists variables for rating outcome are specified to a large extent; "internal" and "external" criteria of measurement are available, with regard to the grid test it has been modified to suit this particular problem of enuresis; this project attempts to promote the scientific status of personality measurement in general; each subject can be seen as his own control as suggested by Schlien et al above.

#### 3.4 Procedure

All subjects were tested just prior to beginning therapy, in the middle of therapy, at closing of the therapeutic sessions, at a six week follow-up and again at a six month follow-up. (Therapy lasted 10 weeks) Calendars noting "dry nights" were held by all parents over the entire period.

Instructions to the child for the five element (neutral) repertory grid were as follows:

"We are going to spend some time sorting these pictures of little boys. It's not a test, it's more like a game. You know how sometimes when you see people for the first time you get some idea of what they are like even before they say or do anything, well I want you to do the same; imagine how these boys would be if you knew them as real people." The child is given approximately a minute

to/.....

to look at the pictures and encouraged to inspect each picture individually and asked if he has any questions. The examiner continued: "I am going to ask you some questions and I want you to point to the one who best answers the question. There is really no right or wrong answer; I'm just interested in how you see these people. The first one is: Point to the one who gets on best with his mother (Construct 1)." Having done so this photograph is placed in the extreme left vacant "box" right next to "Gets on well with mother" on the grid sheet and left there. "Now which of these four boys gets on least with his mother." This photograph is then placed on the extreme right vacant block of construct one right next to "Gets on less well with mother" on the grid sheet and left there. The examiner continued assisting the child in selecting from the available photographs the "boy from these three left who gets on best with his mother" placed it on next vacant box on right of grid sheet. Then the "least" was selected for the right box. "The last one goes in the middle". And at this stage the child has in front of him the five photographs ranked from left to right (i.e. from most to least), he is then asked whether he is "happy" with his sorting, if he was not he was allowed to make the necessary changes. The photographs were then removed one by one and the numbers on their faces (from 1 to 5) were written in the appropriate box by the child himself. The child then continued with supervision until all twelve constructs were "rank-ordered". (The actual process of rank-ordering was done with a computer programme). Trial runs suggested that the children showed more interest when allowed to manipulate the photographs and write the numbers themselves. This appeared to have made the task more "concrete" and more assessable to the younger child.

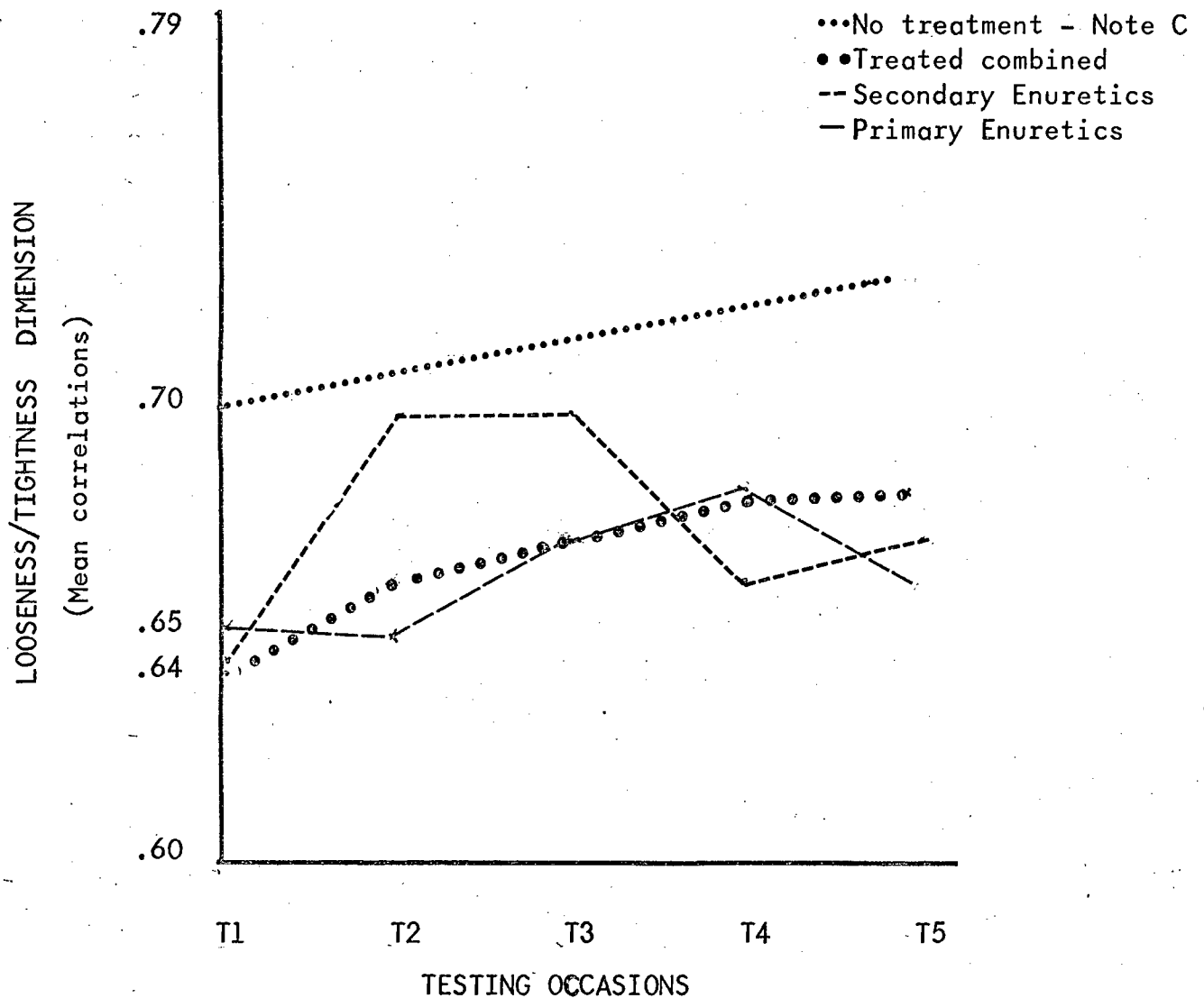
This/.....

This practice speeded up the process as well as eliminated opportunity for error. This particular approach also allowed the examiner to test small groups of children simultaneously. The size of these groups depended on the age and ability of the subjects to cope with the task. In some instances the test was administered especially to younger children, on an individual basis. After each row had been sorted, examiner and examinee checked to see whether no number was written twice. The average time for this group was between 15 to 20 minutes. This included time to establish rapport and put the child at ease.

#### 4.1 Loosening of grids during therapy: (Hypothesis 1)

Operationally, the loosening of a grid is defined as a lowering of the intercorrelations between constructs. The 240 grids were analysed by the INGRID 67 computer programme and the average rho squared (Spearman's rho coefficient) was calculated for each grid (Slater, 1967). The degree to which constructs intercorrelate was derived by calculating average rho squared. "Intensity" scores (Bannister and Fransella 1966; Fransella and Joyston - Bechal, 1971) were not calculated, because the advantage of average rho squared is that it enables more meaningful comparison between grids of different sizes than does the Bannister-Fransella (1966) definition of loosening (low "intensity") which is specific to a grid of a particular size.





The looseness-tightness dimension is derived from average rho (equals square root of average rho squared) for subjects at a given testing occasion.

- Note a) T1 Testing prior to therapy.  
 T2 Testing mid-therapy.  
 T3 Testing at the end of therapy.  
 T4 Testing at 6 Week follow-up.  
 T5 Testing at 6 month follow-up.
- b) T1-5 denote the same for all tables and text.
- c) Tested only at T1 and T5.

Figure 1 shows some changes along the looseness-tightness dimension in terms of the changes in the inter-correlations amongst constructs (For data see tables 1A and 1B, appendix) In order to establish whether these changes are significant a two-way analysis of variance was done with repeated measures on factor B (fixed factors were assumed)

The following between-subjects variables were examined:

- i) the differences in rho squared means over each testing occasion between treated secondary (SE) versus treated primary enuretics (PE);
- ii) the differences in rho squared means at the first and last testing occasions for all treated subjects (SE and PE combined) versus the non-treatment group.

The within-subjects variable was the fluctuation along the looseness tightness dimension for all treated subjects over the 5 testing occasions.

TABLE 1.

ANOVA summary: Inter-correlations for treated PE  
and SE, all administrations

Source	SS	DF	MS	F Ratio	
Between Subjects:					
SE v PE (A)	.014	1	.014	.112	ns
Error	4.052	33	.123		
Within Subjects:					
All treated, combined (B)	.033	4	.008	1.020	ns
AXB	.003	4	.001	.1	ns
Error	1.069	132	.009		

From table 1 it can be seen that no significant results were yielded from the analysis of variance.

A Sheffe multiple comparisons were performed (table 2). No significant differences were found between the intercorrelations for the treated subjects (PE and SE, data combined) and the untreated sample of enuretics at first and last administrations.

TABLE 2.

Sheffe Multiple Comparisons Between Correlations for all Treated Subjects (the data for PE and SE combined) and the Untreated Enuretics at the First and Last Administration

	F	DF		
Admin 1	.150	3	.33	ns
Admin 5	.117	3	.33	ns

No evidence was found to support hypothesis 1, namely that there will be significant "loosening of grids" during therapy.

4.2

The relationship between loosening of grids and favourable outcome (Hypothesis 2)

The results were derived from the correlations between the average rho squared scores (reflecting the loosening-tightening tendencies) and absolute improvement. Absolute improvement refers to the difference between the number of dry nights before and after therapy.

TABLE 3.

Correlations showing the Relationship Between  
Loosening of Grids and Absolute Improvement

Occasion	Treated		No Treatment		
	Correlation Coefficient	N	Correlation Coefficient	N	
1	+.11	33	ns	-.08	10 ns
2	+.03	32	ns		
3	-.21	33	ns		
4	+.07	32	ns		
5	-.08	32	ns	-.52	10 ns

Note - p values here and elsewhere are for one-tailed tests

a T1 Testing baseline prior to therapy

T2 " mid-therapy

T3 " at end of therapy

T4 " at 6 weeks follow-up

T5 " at 6 months follow-up.

T1-5 the same for all tables

This indicates that at no stage of testing, did the loosening of grids appear to have been associated with successful outcome. That is, hypothesis 2 is rejected.

Another way of evaluating the relationship between loosening of

/grids..

grids and favourable outcome is to say that allowing on the one hand that all the treated subjects improved significantly more than the nontreatment groups ( $p < .01$ , table 4) that on the other hand there were no significant differences in the changes along the looseness-tightness dimension between the treated and nontreatment groups (table 2).

Even when taken as their own controls the treated group who improved significantly did not show any significant fluctuations along the looseness-tightness dimension (table 1,B)

TABLE 4.

Absolute improvement for treated and no treatment groups

	$\bar{x}$ nights Improved	SD	N	t	df	
Treated	1.83	1.80	33	3.01	41	xxxx
No treatment	.06	.29	10			
xxxx $p < .01$						

A t-test was calculated for absolute improvement. Absolute improvement refers to the difference between initial number of dry nights and number of dry nights after the experimental period. This was calculated for both the treated and the nontreatment group.

The treated group improved significantly more than the nontreatment group.

4.3. The relationship between successful outcome and the discrepancy between the self construct and the ideal construct (Hypothesis 3 and 4)

TABLE 6.

Correlations of the self-ideal discrepancy  
with improvement over all testing occasions

Occasion	Treated	N	No treatment	N
Pre-Therapy baseline(T1)	-.34 xx	33	.85 xxxx	10
Mid-Therapy (T2)	.08	32		
End-Therapy (T3)	.05	32		
6 Week follow-up (T4)	.02	32		
6 Month " (T5)	.04	32	-.51 <sup>a</sup>	10

Note - p values are one-tailed

All correlations are Pearson r's

a. This was also the pre-therapy stage of the nontreatment group, not reported in this project

xx  $p < .025$

xxxx  $p < .005$

Table 6 indicates the extent to which the self-ideal discrepancy correlates with absolute improvement.

Treated subjects show a significant negative correlation, when their pre-therapy discrepancy self-ideal is correlated with absolute improvement ( $p < .05$ ). When the treated group is seen as their own controls and later testing sessions are inspected no further significant relationships are found. Thus the pre-therapy relationship between self and ideal in this case appeared to have been prognostic of outcome; That is for the treated subjects, those subjects who showed smaller discrepancies between self and ideal showed the least eventual improvement. That is, these subjects showed larger correlations between self and ideal constructs.

To state it differently the larger the initial self-ideal discrepancy the better the eventual improvement.

For the nontreatment group, testing at the beginning of the control period yielded a significant positive relationship between the self-ideal discrepancy and "spontaneous" improvement. That is, those subjects who saw self as more similar to ideal self showed the most spontaneous improvement.

Another way of exploring the self-ideal discrepancy and its relationship with improvement is to look at how the self-ideal correlation fluctuated for the treated group who improved significantly more than no treatment group, and compare thus the self-ideal correlation changes, for the no-treatment group. (Table 4 shows the difference in improvement for the treated and no treatment groups)

TABLE 7.

4.4 Correlations between self and ideal constructs over all testing occasions.

Occasion		Treated		No Treatment	
		Correlation Coefficient	N	Correlation Coefficient	N
Pre-Therapy	T1	.44 <sup>xx</sup>	35	.45	10
Mid-Therapy	T2	.49 <sup>xxx</sup>	34		
End-Therapy	T3	.38 <sup>x</sup>	34		
6 Week follow-up	T4	.55 <sup>xxx</sup>	31		
6 Month follow-up	T5	.56 <sup>xxx</sup>	33	.51	10

x  $p < .05$  (two tailed)    xx  $p < .02$  (two tailed)    xxx  $p < .01$  (two tailed)

Table 7 shows a significant relationship between self and ideal constructs over all testing occasions for the treated group. No relationship at a significant level showed for the no-treatment group.

The non-significance of the no treatment group's correlations is probably only due to the small size of this group. ( $N = 10$ )

The next step was to see whether the self-ideal correlation changed significantly for the treated (improved) group versus the nontreatment (nonimprovement) group.

Using Fischer's  $r$  to  $Z$  transformation the significance of the difference in the correlations from T1 to T5 was tested for the treated group. This was also done for T1 and T5 of the nontreatment group. For the treated group  $z$  equals .908, while for the no treatment group  $z$  equals .247. Neither of these results are significant.

In using Fischer's  $r$  to  $Z$  transformation no account has been taken of the correlation which must exist between the two values to be compared. This then simply yields a conservative test of the hypothesis of no difference between these two values.

Thus it appears as if:

- (a) a moderate and significant self-ideal correlation is prevalent over all testing occasions;
- (b) that this relationship did not change significantly, either increased or decreased over the experimental period;
- (c) that a significantly negative relationship existed between the initial self-ideal discrepancy and eventual outcome (at T1 for the treated group).

Hypothesis 3, that the discrepancy between self and ideal will decrease after successful therapy is not supported by these results.

Hypothesis 4, that there will be a negative correlation between self-ideal discrepancy and successful outcome appears to be supported by these results.

Thus the self-ideal discrepancy before therapy appears prognostic of outcome.



4.5

The grid will validly identify the existence of symptoms (enuresis) in the subjects (Hypothesis 5.)

This was operationally defined by the correlation between construct 10 (the self-construct) and construct 12 (the enuresis construct)

TABLE 8.

Correlations between self and enuresis constructs  
over all testing occasions.

Occasion		Treated		No treatment	
		Correlative Coefficient	N	Correlative Coefficient	N
Pre-Therapy	T1	-.24	33	-.07	10
Mid-Therapy	T2	-.33 <sup>x</sup>	31		
End-Therapy	T3	-.10	35		
6 Week Follow-up	T4	-.20	32		
6 Month Follow-up	T5	-.21	32	-.16	

x  $p < .05$  (one tailed)

Table 8 shows a significant negative correlation for the treated group's self construct which correlated negatively with the positive pole (clinically and numerically) of the enuresis construct ( $p < .05$ ). That is, self correlated with "most likely to wet his bed" during therapy. Thus the negative correlation simply means that they see themselves as enuretic.

The diagnostic validity of the grid in this instance is disappointingly low, with very low correlations in the predicted direction. The one significant figure may indeed be due to chance.

Thus hypothesis 5 is supported only very slightly and unconvincingly.

4.6

Subjects who are willing to accept their enuresis are more likely to improve: (Hypothesis 6)

Operationally this was defined as the correlation of improvement with the relationship between self (construct 10) and enuresis (12).

TABLE 8.

Correlations between self and enuresis construct  
correlated with improvement.

Occasion		Treated		No Treatment	
		Correlation Coefficient	N	Correlation Coefficient	N
Pre-Therapy	T1	.13	32	.60 <sup>x</sup>	10
Mid-Therapy	T2	.04	30		
End-Therapy	T3	.40 <sup>xx</sup>	33		
6 Week Follow-up	T4	.29 <sup>x</sup>	33		
6 Month Follow-up	T5	.24	31	-.26	10

x  $p < .05$

xx  $p < .025$

The treated subjects showed a positive correlation at the end of therapy ( $P < .025$ ) and at the 6 week follow-up ( $p < .05$ ) between improvement and the self/enuresis relationship. That is, those subjects who saw themselves as least likely to wet their beds improved significantly more in absolute terms, when evaluated at the end of therapy and during the 6 week follow-up. The no treatment group shows a similar tendency when evaluated at T1. This may be seen as corroborative evidence for the findings of the treated group, although interpretation of the no treatment groups' results must be done with caution, because of its small number of subjects.

TABLE 9.

The relationship between accepting self as an enuretic  
and actual number of days dry at the particular  
testing occasions.

Occasion		Treatment		No Treatment	
		Correlation Coefficient	N	Correlation Coefficient	N
Pre-Therapy	T1	-.26	30	.08	10
Mid-Therapy	T2	-.37	28		
End-Therapy	T3	-.18	31		
6 Weeks Follow-up	T4	-.44 <sup>xxx</sup>	28		
6 Month Follow-up	T5	-.16	29	.10	10

xxx  $p < .02$  (two-tailed)

When the correlation between self-construct (10) and enuresis construct (12) is correlated with number of dry days the treated group shows a negative correlation at T4. No other significant correlations were found. That is, with the 6 week follow-up the subjects of the treated group who had fewest dry nights saw themselves as least likely to wet their beds. Conversely, those who had most dry nights saw themselves as most likely to wet their beds.

Reading the data of table 8 and 9 together it appears that before and during therapy neither acceptance or denial appeared to have played a role. Those subjects who saw self as dry at the end of therapy and during follow-up also showed the greatest concomitant improvement. It appears also that denial is affected by how dry the subject is at a given moment.

After therapy those subjects who experienced fewer dry nights were inclined to deny their enuretic status while those subjects who experienced more dry nights more often admitted to have been enuretic.

#### 4.7 When ideal is seen as dry improvement is better: (Hypothesis 7)

Operationally this was defined as the correlation of improvement with the relationship between ideal (construct 11) and enuresis (construct 12)

TABLE 10.

Correlations between ideal and enuresis constructs  
correlated with improvement.

Occasion		Treatment		No Treatment	
		Correlation Coefficient	N	Correlation Coefficient	N
Pre-Therapy	T1	.17	32	-.42	10
Mid-Therapy	T2	.01	31		
End-Therapy	T3	.51 <sup>xxx</sup>	33		
6 Week Follow-up	T4	.11	32		
6 Month Follow-up	T5	.27	31	-.15	10

xxx  $P < .005$  (one tailed)

This indicates that those subjects who saw their ideal as dry at the end of therapy improve most ( $p < .005$ ). No other significant relationships were found.

TABLE 11.

Correlation between ideal and enuresis constructs  
correlated with number of days dry at the time of testing.

Occasion		Treatment Correlation Coefficient	N	No Treatment Correlation Coefficient	N
Pre-Therapy	T1	-.14	30	-.12	10
Mid-Therapy	T2	-.28	29		
End-Therapy	T3	-.47 <sup>xx</sup>	31		
6 Week Follow-up	T4	-.61 <sup>xxxx</sup>	30		
6 Month Follow-up	T5	-.20	29	-.68 <sup>xx</sup>	

xx  $p < .02$  (two tailed)      xxx  $p < .01$  (two tailed)

The significant negative correlation for the treated group (T3,  $p < .01$ ; T4,  $p < .005$ ) suggests that the wetter they were, the more they saw the ideal as being dry. Conversely the dryer they were the less they saw the ideal as being dry.

TABLE 12.

The correlation between mean number of days dry during the period of testing and absolute improvement (the difference in number of days dry before and after therapy)

Occasion		Treatment		No Treatment	
		Correlation Coefficient	N	Correlation Coefficient	N
Pre-Therapy	T1	-.55 <sup>xxxx</sup>	31	.08	10
Mid-Therapy	T2	-.31	33		
End-Therapy	T3	-.23	33		
6 Week Follow-up	T4	-.20	33		
6 Month Follow-up	T5	+.26	33	.10	10

xxxx  $p < .01$  (two tailed)

The treatment correlation at T1 showed a significant result ( $p < .01$ ). However, when the treatment correlation is compared with the non-treatment correlation at T1, using Fischer's  $r$  to  $Z$  transformation, a non-significant result is found ( $Z = 1.48$ ,  $p > .05$ ). Thus the initial significant result (-.55) seems to be due to Galton's regression to the mean effect.

This indicates that no significant relationship existed between mean number of days dry during the period of testing and absolute improvement.

To conclude it may be that towards the end of therapy and with follow-up the wetter subjects saw ideal as being dry because in fact they have improved relatively more than the dryer subjects (at that stage) and therefore they were more hopeful about their future prospects of being dry.

4.8

The prognosis is better the larger the discrepancy is between self-image as an enuretic and ideal-self-image as an enuretic (Hypothesis 8).

Operationally this was defined as the difference between:

1. The correlation of the self construct (10) with the enuresis construct (12); and
2. The correlation of the ideal-self construct (11) with the enuresis construct (12). This difference is then correlated with improvement.

TABLE 13.

The difference between: (1) the self and enuresis construct correlation and (2) ideal and enuresis construct correlation correlated with improvement. (a S/E - I/E) / Imp.)

Occasion		Treatment		No Treatment	
		(S/E-I/E)/Imp Coefficient	N	(S/E-I/E)/Imp Coefficient	N
Pre-Therapy	T1	-.27	35	-.74 <sup>xxx</sup>	10
Mid-Therapy	T2	.00	35	.	
End-Therapy	T3	-.07	35		
6 Week Follow-up	T4	-.43 <sup>xxxx</sup>	35		
6 Month Follow-up	T5	-.26	35	.12	

x p < .05 (one tailed)    xx p < .025 (one tailed)    xxx p < .01 (one tailed)  
 xxxx p < .005 (one tailed)

Note: - a S/E = self/enuresis correlation    I/E = Ideal enuresis correlation  
 Imp = Improvement

This indicates that a significant negative correlation existed at T1 (no treatment p < .01), at T4 (treatment p .005), and at T5 (.29 is required significance at the 5 per cent level) It means that the hypothesis is rejected, and that in

fact/....

fact the larger the discrepancy between self-image as an enuretic and ideal self-image as an enuretic the poorer the improvement was. Conversely, the smaller this discrepancy was, the larger the associated improvement. The more self and ideal-self was seen as having a similar enuretic status, the better the improvement was.



4.9

Wetter subjects will show larger discrepancies between the self-enuresis correlation and the ideal-enuresis correlation than is the case with dryer subjects: (Hypothesis 9)

Operationally this is defined as the difference between the self-enuresis correlation and the ideal-enuresis correlation correlated with number of days dry .  $(S/E - S/I)Dry$

TABLE 14.

The difference between: (1) the self-enuresis correlation and (2) the ideal-enuresis correlation correlated with number of days dry at the time of testing.  $(S/E - I/E) / Dry$

Occasion		Treatment		No Treatment	
		$(S/E - I/E) / Dry$ Coefficient	N	$(S/E - I/E) / Dry$ Coefficient	N
Pre-treatment	T1	-.03	35	-.02	10
Mid-treatment	T2	-.01	35		
End-treatment	T3	-.31 <sup>x</sup>	35		
6 Week Follow-up	T4	-.20	35		
6 Month Follow-up	T5	-.05	35	-.66 <sup>xx</sup>	10

Note - x  $p < .05$  (one tailed)      xx  $p < .025$  (one tailed)

SE = secondary enuretics;      PE = primary enuretics

This indicates that a significant negative correlation existed at T3 for the treated group ( $P < .05$ ,  $df33$ ) and at T5 for the no treatment group ( $p < .025$ ,  $df8$ ). At the end of treatment those subjects who were driest also had the smallest discrepancy between the self-image as an enuretic and ideal-image as an enuretic. At the end of the control period those of the untreated subjects who were driest also had the smallest discrepancy between construing self as wet and ideal as wet. Thus hypothesis 9 is rejected.

Reading tables 12 and 13 together it appears that the smaller the discrepancy subjects experience between self as enuretic and ideal as enuretic the dryer they were, and the greater improvement they showed (Hypothesis 8 rejected; hypotheses 9 accepted)

4.10 There will be a significant change in the relationship between the self construct (10) and other constructs over the initial (T1) and final (T5) testing occasions. The change will be in the direction of improvement:

Hypothesis 10 was operationally defined as the difference between the mean correlations (between self and all other constructs) at the pre-treatment stage (T1) and the mean correlations (between self and all other constructs) at the 6 month follow-up stage (T5). (d(1-5 table 14) Improvement means that at T5 self construct will correlate more highly with "positive" pole of all other constructs than it did at T1. "Positive" is used here simply in the clinical sense of what is generally regarded as clinically more ideal behaviour and it does not have a numerical or statistical connotation. For example, after therapy the subjects will get on better with father/mother etcetera than before therapy.

TABLE 15.

Changes in the relationship between self construct and all other constructs covering the period between pre-therapy (T1) testing and testing at 6 month follow-up (T5), for the following three groups: in secondary enuretics (S.E); primary enuretics (P.E.) and the non-treatment groups

Self Construct With:	Treated		Treated		Treated		No Treatment	
	SE(df17) d(1-5)	t	PE(df16) d(1-5)	t	(SE+PE(df33) d(1-5)	t	(df9) d(1-5)	t
1.	-.29	-1.90	4.70	.28	-1.18		-.19	-.66
2.	-.13	-.80	-.16	.02	-.90		-.17	-.63
3.	.10	.60	-.17	1.05	.06		.04	.16
4.	-3.89	-.25	.10	.86	.06		-.01	-.04
5.	-.30	-1.58	4.11	.34	-1.16		.13	.50
6.	-5.00	-.35	-.36	-3.29 <sup>xxx</sup>	-1.27		.25	1.79
7.	-6.11	-.42	.21	1.18	.19		.00	.00
8.	.46	.98	3.53	.21	2.82 <sup>xxx</sup>		.86	2.64 <sup>x</sup>
9.	1.32	.00	.51	2.88 <sup>xx</sup>	1.00		-.15	-.65
11.	1.67	.00	-.22	-1.19	.22		.02	.07
12.	-.22	.00	.10	.46	-.62		-.03	-.12

Note - PE = primary enuretics; SE = secondary enuretics; d(1-5) = the difference between correlation of self and each other construct at T1 and the correlation between self and each other construct at T5

x p < .05 (twotailed)    xx p < .02 (twotailed)    xxx p < .01 (twotailed)

This indicates significant changes between:

self construct and construct 6 for primary enuretics ( $p < .01$ );  
self construct and construct 9 for primary enuretics ( $p < .02$ );  
self construct and construct 8 for all treated subjects (PE+SE;  $p < .01$ )  
self construct and construct 8 and for no treatment group ( $p < .05$ )

Out of 48 "results" one could expect about  $2\frac{1}{2}$  "results" to be significant at the 5% level due to random fluctuations. Actually 4 "results" were significant at this level. Thus one would treat these results with caution.

In conclusion it seems that the results were too tenuous to accept hypothesis 10.

#### 4.11 The influence of intelligence:

Operationally intelligence is defined here by what is measured by factor B of the C.P.Q. (Porter, 1963; 1972) Factor B gives a brief measure of general ability (g).

TABLE 16.

The Correlation of Intelligence (Factor B) with the following variables:

Occasion		Treated Subjects												H 9 S v.all other constructs	
		H 1/2		H 5		H 6		H 3/4		H 8					
		"looseness"		SvE		IvE		SvI		Imp.		SvE-IvE		diff	$\bar{x}(1-5)$
		N		N		N		N		N		N		N	
Pre-Treatment	T1	.30	35	-.01	33	-.12	34	.32	35	-.06	33	-.05	35	.02	34
Mid-Treatment	T2	.27	34	-.03	31	-.33	33	.14	34			-.26	35		
End-Treatment	T3	.33	35	-.27	35	-.57 <sup>xxx</sup>	35	.25	34			-.28	35		
6 Week Follow-up	T4	.29	34	-.01	32	-.03	34	.23	34			.01	35		
6 Month Follow-up	T5	.26	33	-.36	32	-.36 <sup>x</sup>	32	.44 <sup>xx</sup>	33			-.07	35		
No Treatment Subjects															
Begin Control	T1	.15	10	.51	10	-.11	10	.60	10	.37	10	-.26	10		
End Control	T5	-.06	10	-.36	10	-.34	10	.19	10			.01	10		

Note - S = self construct; E = enuresis construct; I = ideal construct; Imp = improvement

v = correlated with (versus)

H1 to H9 pertains to hypothesis

x p < .05 (two-tailed) xx p < .02 (two-tailed) xxx p < .01 (two-tailed)

Significant relationships occurred between

- a) the ideal /enuresis correlation and intelligence  
(T3 :  $p < .01$ ; T5 :  $p < .05$ ), and,
- b) between the self/ideal correlation and intelligence  
(T5 :  $p < .02$ ).

However, further analysis indicated that from these 38 "results" in table 16 one could have expected about 2 "results" to be significant at the 5% level due to random fluctuations. Actually only three results were significant at this level. Thus one would treat these results with caution.

Due to the fact that the results were only slightly better than could have been expected by chance hypothesis 11 cannot be rejected with confidence.



The subjects were of average intelligence as can be seen from table 17.

TABLE 17

Factor B, CPQ

	Mean	SD	N
Treated	5.8	2.2	35
No Treatment	5.6	2.4	10

4.12 The influence of age:TABLE 18.Age in months.

	Mean	SD	N
Treatment	1271	17.5	35
No Treatment	1279	17.5	10

Thus mean age for all subjects was about 10 years, 7 months with a standard deviation of 1 year, 6 months.

TABLE 19

The Correlations between Age and the following variables:

Occasion		Treated Subjects												H 9 S v.all other constructs	
		H 1/2		H 5		H 6		H 3/4		H 8					
		"looseness"		SvE		IvE		SvI		Imp		SvE-IvE		diff $\bar{x}$ (1-5)	
		N		N		N		N		N		N		N	
Pre-Treatment	T1	.20	35	-.02	33	-.24	34	.30	35	.03	33	-.26	35	.08	34
Mid-Treatment	T2	.14	34	.06	31	-.27	33	.11	34			-.26	35		
End-Treatment	T3	.21	35	.25	35	-.32	35	.14	34			-.06	35		
6 Week Follow-up	T4	.29	34	-.07	32	-.27	34	.15	34			-.20	35		
6 Month Follow-up	T5	.25	33	-.30	32	-.31	32	.09	33			-.05	35		
No Treatment Subjects															
Begin Control	T1	.40	10	.50	10	.07	10	.28	10	-.07	10	-.26	10		
End Control	T5	.47	10	.11	10	-.25	10	.77 <sup>xx</sup>	10			-.18	10		

Note: - see table 15 footnote for explanations of abbreviations

xx  $p < .02$  (two-tailed)

Table 19 shows a "significant" relationship between age and the self/ideal correlation at T5 for the no treatment group ( $p < .02$ )

However, from 38 "results" one could expect about 2 "results" to be significant at the 5% level due to chance fluctuations. Thus this one "significant" result is less than what one would expect from chance expectation and thus too trivial to reject hypothesis 12.

## 5.0 DISCUSSION

In order to bring this discussion into clear focus it has been necessary to restate and further qualify the basic aim. This project was undertaken to investigate some aspects of the diagnostic and prognostic validity of the five-element rank order repertory grid (REP 5). This has been affected at various levels of analysis, with children undergoing psychotherapy in a child guidance clinic. Validity refers to "the degree to which the test actually measures what it was designed to measure". (Anastasi, 1968). REP 5 was evaluated against a variety of criteria and at different levels.

At times the test was validated against external criteria at an objective level. This was done when REP 5's ability to identify symptoms in subjects known to manifest these symptoms (viz. enuresis) was investigated. At times the test was validated against information arising from theory, research or expected dynamic behaviour, at a theoretical, research or dynamic level. (Note the statement of the main hypotheses and their rationale, above. Thus for this study, enuresis or the outcome of hypnotherapy are not important per se.

Important is the fact that a framework has been provided within which the validity of REP 5 could be evaluated; from a series of protocols by enuretics undergoing therapy. This framework consists of a relatively homogeneous sample of test subjects. The subjects were well matched with each other, and acted as their own controls over the experimental period. These subjects had a relatively well defined and measurable problem and were undergoing a highly standardized therapeutic programme.

Improvement and change in the status of the symptom was objectively measurable in terms of number of nights dry. The task was to determine

whether/.....

whether REP 5 could register

- (a) in a predictable and meaningful way the expected relationships between the relevant variables, and
- (b) changes in these relationships.

The results did not confirm the first hypothesis. No evidence was found to support the hypothesis that there will be a significant loosening of grids during or after therapy.

The degree to which constructs intercorrelated appeared remarkably stable for the period of 8 months over which the project was run. An analysis of variance indicated that no significant fluctuation in the level of intercorrelation between constructs existed over this 8 month period. This fluctuation was not significant between the subjects (SE v PE) or within subjects (the combined treated subjects). A Schelfe multiple comparison showed that no significant difference existed in the degree to which constructs intercorrelated between the treatment and the non-treatment group.

This finding is at variance with what has been found with adult subjects, namely:

- (a) Bannister and Fransella (1971) found a significant increase in the intercorrelations between constructs over two grids with adults; both thought-disordered and normals. They found that normal adults tightened 30 per cent over two grids. Thought-disordered adults tightened by 25 per cent.
- (b) This they claim, may be taken to suggest "that even at very low levels of structure, tightening remains a test (and may be a therapeutic) possibility. They concluded that the mere "articulation of construing necessary to complete a grid initiates a tightening process in itself".

(c) Fransella/.....

- (c) Fransella and Joyston-Bechal (1971) used a sample of 8 patients undergoing psychoanalytically orientated group therapy. They found that the intercorrelations for their patients' constructs lowered (loosened) significantly. These constructs were supplied and selected to suit the therapy programme.

The results under (c) were not representative of changes throughout the whole construct system of these patients as scores on the Bannister-Fransella Grid test (1966 version) showed no significant changes along the tightness-looseness dimension.

Thus insofar as it is reasonable to compare the results of the adult studies with the results of this project, the following may be said:

- (i) Unlike the adult studies no significant loosening or tightening of grids were found during therapy;
- (ii) The direction of change was one of a slight tightening which did not reach a significant level.

This supports the findings of Fransella and Joyston-Bechal (1971) using the Bannister-Fransella Grid test.

- (iii) The fact that there were no significant changes along the looseness-tightness dimension over 5 testing occasions spanning 8 months put a question mark to the conclusion that the mere act of construing necessary to complete a grid initiates a tightening process.

The observations of Fransella and Joyston-Bechal (1971) may provide us with a tentative explanation for absence of the loosening phenomena in the current project. They felt that their psychoanalytically orientated therapists encouraged loosening. This was not the case during hypnotherapy and perhaps because of this no loosening took place. Thus type

of/.....

of therapy may determine whether loosening will occur. That is, no loosening can be expected to take place without the therapeutic programme or the therapist not actively encouraging it to occur.

It does not seem true, for children at least, that the mere act of construing will lead to a tightening of grids. Conceivably a tightening of grids must be encouraged before one may justifiably expect it to occur.

Hypothesis 11 is associated with the first hypothesis and has not been confirmed. No evidence was found to support the hypothesis that there will be a significant relationship between favourable outcome and the loosening of grids during therapy. Treated subjects improved without a concomitant loosening of grids.

This may mean that

- (i) a reorganization of ideas are not essential for this particular form of hypotherapy to be effective, or
- (ii) to be more specific for improvement of enuretics undergoing hypnotherapy a reorganisation of ideas is not essential.

This explanation seems reasonable if one accepts that the insight, regarded as necessary for improvement to occur with analytically orientated therapies, is not intrinsic to the hypotherapy used in this project.

To over-simplify, in this hypnotherapy improvement was effected without insight. If in addition to this enuresis is seen as an isolated symptom which does not necessarily reflect an underlying disorder; (Wolman, 1972, Kolvin, 1971) then creditability is given to observation that the removal of this does not necessitate the loosening or reorganisation of grids.

Thus it seems that the outcome of hypothesis 11 is logical and acceptable

in/.....



in terms of what is known about the nature of hypnotherapy and enuresis.

No evidence was found to support the hypothesis that the discrepancy between self and ideal will decrease after successful therapy. The results did not confirm hypothesis 3.

Hypothesis 4 is associated with hypothesis 3. Qualified evidence was found to support the hypothesis that there will be a negative correlation between self-ideal discrepancy and successful outcome. The self-ideal discrepancy, when measured, before therapy was prognostic of outcome. Those subjects who showed the largest initial discrepancy between self and ideal-self showed the best eventual improvement. Those subjects who saw self as most like ideal, showed the least eventual improvement.

Hypotheses 3 and 4 will be discussed together.

From the evidence it appears as if a moderate and significant self-ideal correlation prevailed over all testing occasions for the treated group. The intensity of this relationship did not change significantly over the experimental period. The no-treatment group showed no similar significant relationship. Thus it appears that one of the characteristics of the treated, and improved group, was that they saw self and ideal as significantly similar. The no-treatment controls showed a similar tendency, when those of them who saw self and ideal-self as significantly similar, showed the best "spontaneous" improvement. This relationship between a moderate self-ideal correlation and improvement does not seem to hold for all cases. Because the results also indicated that the more subjects initially saw both self and ideal as similar, either both as enuretic or both as dry, the poorer the prognosis turned out to be. Thus it seems that a possible explanation

for/.....

for these conflicting points would be that where a moderate positive relationship between self and ideal exists this is predictive of a favourable outcome for enuretics treated with hypnotherapy. But when the relationship between the self-ideal correlation is of a more extreme nature, that is, self is seen as very similar to ideal self, the prognosis is poor.

An analogy with research on adults may clarify this more:

On the one hand adult psychiatric patients showed larger differences between self and ideal self than did normals. On the other hand extreme self-ideal correlations may be suggestive of maladjustment (e.g. paranoid schizophrenics; Friedman, 1955). It is then possible that those enuretics who had an above average correlation between self and ideal were more maladjusted and consequently showed less eventual improvement. Corroborative evidence for this is that older and more intelligent subjects (Tables 15 and 16) showed a higher self-ideal correlation. It may be that for some of these subjects, because they were older and more intelligent, enuresis was a more traumatic experience and consequently they were more upset by it and showed less improvement. This explanation for the outcome of hypothesis 3 is at a speculative level, but provides possibilities for further research with enuretics using the grid to explore self-ideal relationships with improvement. The main purpose here was to begin to illustrate the usefulness of the grid with this type of research.

To reiterate: Extreme similarity between self and ideal, which may suggest maladjustment, is indicative of a poor prognosis. It seems that no decrease in the self-ideal discrepancy was found presumably because they were not markedly maladjusted or neurotic. A moderate self-ideal

correlation/.....

correlation was present in the improved group over all testing occasions. The intensity of this relationship did not change over the experimental period.

Limited evidence was found in support of hypothesis 5. The one significant figure may indeed be due to chance. The diagnostic validity of the grid in this instance is disappointingly low, with very low correlations in the predicted direction.

The inability of the grid to identify the enuresis symptom prior to the commencement of therapy may be due to several factors:

- (i) A finding of some generality is that a member of a class does not relate his self-concept at all closely to a stereotype which he himself uses for that class. (Fransella, 1968; Hudson, 1968; Hoy, 1973.)
- (ii) Analogous to Bannister and Fransella's (1971) statement that "A person can see himself as a stutterer in the context of talking to people but in more general context he sees himself as quite different from the group of 'stutterers'", one may say that during the first testing session (prior to therapy) the subjects did not particularly view themselves as enuretics. Firstly, they met alone with the tester in a setting not resembling the enuresis-associated setting. Secondly, enuresis was never directly mentioned between the tester and testees. However, during hypnotherapy enuresis was often mentioned directly and indirectly in the suggestions so that one is not surprised that even in the clinical setting the subject now views himself as enuretic, and this is reflected in the grids. At the end of therapy and during follow-up, the subjects were already much improved and the feeling that they were enuretics

must/.....

must have weakened considerably. Thus it is understandable that no further identifications between self and enuresis were manifested.

An alternative explanation will be that being an enuretic forms part of the enuretic's self concept when direct questions are asked but does not necessarily do so when measurement is more indirect. Beech and Fransella (1968) found evidence to support the existence of such a tendency with stutterers.

The implications for psychometrics are that:

- (i) unless a subject has accepted his symptom as part of his self he may not reflect this during testing;
- (ii) a testee may not see himself as a member of a class manifesting a certain symptom the tester is examining for during the testing session. The testee may quite appropriately respond with the symptom-free part of his self in a setting unrelated to the setting he associates with his symptom. It must be quite easy for an active child to "forget" that he is an enuretic, many hours after the incident with a clinician relating to his whole personality rather than to him as a bedwetting-organism.
- (iii) Direct questioning about a symptom may give better results than indirect questioning.

The positive implications for therapy are that the grid seems to be able to assess whether the patient undergoing therapy has accepted his symptom, or is still denying the existence of his problem.

The results did not support hypothesis 6. No evidence was found to support the hypothesis that:

The more the subject is willing to accept his enuresis, the greater the

likelihood/.....

likelihood of his improvement. Denial of the symptom was hypothesised not to be conducive to therapeutic improvement.

Before and during therapy no evidence of either general acceptance or denial of the symptom was found.

Those subjects who saw themselves as dry at the end of therapy and during follow-up also showed the greatest concomitant improvement. This may simply mean, as has been suggested under hypothesis 5, that initially self is not identified with the symptom. But during therapy the existence of the symptom is accepted. At the end of therapy and with follow-up those subjects who improved most also saw themselves as "least likely to wet their beds". The latter may then simply reflect the situation as it was at that moment. This reflects a change in the status of the symptom.

However some subjects did deny the existence of their enuresis. The results suggest that during and after therapy those subjects who experienced fewer dry nights were inclined to deny their enuretic status, while those subjects who experienced more dry nights more frequently admitted to have been enuretic.

The fact that denial played no role in influencing the improvement of the treated groups is not incongruent with hypnotherapy, as insight is not a prerequisite for hypnotherapy to be effective.

Thus the grid reflected a situation and changes quite compatible with what one may expect under hypnotherapy. It also appears to be capable of registering changes in the status of the symptom: Subjects who were dryer reflected this in their grid protocols. The finding that subjects who were dryer denied their enuretic status less, is as one can expect dynamically. That is, as they became dryer it also became safer to admit to their problem.

Hypothesis/.....

Hypothesis 7, that the more the subject sees ideal-self as dry the greater the likelihood of his improvement, was supported by the results, with certain reservations. These reservations are that the hypothesis is supported depending on

- (a) the stage at which testing was done, and on
- (b) how dry the subject was at the time of testing.

At the end of therapy, those subjects who saw their ideal as dry, improved most. But there were indications that those subjects who were driest, at the end of therapy and with the 6 week follow-up, saw their ideal as comparatively more likely to wet their beds than those who were in fact wetting more. Conversely, the wetter they were, the more they saw their ideal as least likely to wet his bed. Thus it seems that those subjects who were less dry saw their ideal as least likely to wet his bed, that is, they were more motivated to improve, and they also improved most. The subjects who experienced more dry days (not improvement) saw their ideal as comparatively more likely to wet their beds, thus they were less motivated to improve, and consequently they improved less. (Table 11). Presumably the subjects needed the whole hypnotherapy course with its positive suggestions to develop this favourable view of their ideal-self which made them more motivated to improve. The fact that those who were least dry had comparatively the most positive view of their ideal, may mean that they were more desperate to improve, more involved with the programme, and more impressed with small gains in dryness. On the other hand, one may speculate that those who experienced more dry days towards the end of therapy found small improvements more difficult to achieve and less inspiring. Perhaps at this stage they experienced disappointment and gave up hope of ever becoming completely dry. A relapse at this level of dryness might also have been experienced as more demoralising

than/.....

than for a less dry subject, hence the comparatively negative view of ideal-self.

An additional explanation may be that the subjects who were initially the wettest, experienced the greatest improvement relative to those who were initially dryer, and therefore they became more hopeful and saw their ideal as more dry, than did the dryer subjects at that stage.

This inturn might have motivated them to become dryer. (Table 11).

Hypothesis 8 was not supported. The evidence did not support the hypothesis that the prognosis is better the larger the discrepancy between self-image as an enuretic and ideal-image as an enuretic. In fact, results indicated that the larger this discrepancy, the poorer the improvement turned out to be. That is, the more self and ideal-self was seen as having a similar enuretic status the better the improvement was.

An associated hypothesis (a) was also not supported. Evidence suggested that the dryer a subject was at the end of therapy, the smaller the difference he experienced between the self-image as an enuretic and his ideal-self-image as an enuretic.

It seems that the dryer the subjects became the less difference they experienced between their actual enuretic status and their improved enuretic status. This may mean that because they improved most, they were dryer and they experienced a smaller discrepancy between their self- and ideal enuretic status. The converse of this argument appears to be equally meaningful. That is, that those who improved least, were wetter, and experienced a larger discrepancy between their self and ideal enuretic status.

Hypotheses/.....

Hypotheses 8 and 9, although not supported, illustrate again the usefulness of the grid to meaningfully register changes in subjects over a period of time.

Although some of the results regarding hypothesis 10 prove to be interesting they are not very different from what could be expected from chance expectation alone. Thus one cannot say with conviction that the results support hypothesis 10. This being the case it seems as if no important changes in the relationship between self and other constructs occurred.

The fact that changes were registered along so few of the construct dimensions may suggest that enuresis in this case can be seen "not as a symptom of emotional disturbance but as a failure to develop adequate cortical control over subcortical reflex mechanisms". (Lovibond, 1971).

Considering the nature of the results further investigation in this connection may be justified.

These changes manifested by the grid can be said to be reasonably validated in that they are meaningful and understandable in terms of some of the available body of knowledge and theory. Without doubt this validation will have to be done with greater rigor against other external criteria before it can be said to be truly established.

The results were too tenuous to reject hypothesis 11, that there will be no relationship between intelligence and any of the variables explored in this project.

Hypothesis 12, that there will be no significant relationship between age and any of the variables explored, were not rejected due to the trivial results.

The/.....



The findings regarding hypothesis 11 and 12 are consistent with adult research. It is generally held that intelligence above I.Q. 80 and ages below 60 seem to have no significant influence on the basic grid scores. (Fransella and Bannister, 1967).

Thus REP 5's performance is further validated if one compares its results with those of adult research.

### CONCLUSION

This project was carried out on a sample of enuretic subjects and its results are not necessarily generally applicable. Note though that all enuretic children are not regarded by all authorities as being psychologically disturbed. (Kolvin 1971, Wolman 1971). Thus useful inferences may be made from this work on enuretics where normal subjects are considered.

In clinical work two levels of investigation are appropriate concerning:

- (i) how patients differ from normal subjects, and
- (ii) how patients differ from one another.

The present investigation falls in the latter category and can, therefore, only provide information about the grid performances of groups of enuretics, which, in itself, is important.

The focus of this project was to investigate some aspects of the diagnostic and prognostic validity of the five-element rank order repertory grid with enuretic children undergoing hypnotherapy.

No evidence was found to show that a significant loosening of grids takes place during therapy. Neither has the loosening of grids been found to be essential before improvement could be effected by means of hypnotherapy. It is then concluded that the type of therapy may

be an/.....

be an important variable for determining the loosening/tightening of grids. The loosening/tightening of grids may perhaps be only of importance in therapy where "insight" is important or where explicit goals are pursued which are conducive to the promotion of this phenomenon. For example, Fransella and Joyston-Bechal (1971) mentioned the possibility that when loosening is regarded as a desirable event the therapist may in fact unintentionally encourage its occurrence and its persistence. Free association is claimed to induce the loosening of grids.

The degree to which the constructs intercorrelated appeared remarkably stable over 8 months and 5 administrations. No significant changes were noted in this respect. This is suggestive of a remarkable reliability of the test with reference to the looseness-tightness phenomenon and its applications. (Test reliability is the consistency of scores obtained by the same persons when retested with an identical test or with an equivalent form", Anastasi, 1968).

This finding challenges the explanation that the mere act of completing grid forms, if repeated, will lead to a tightening of these grids. (Bannister and Fransella, 1971).

Contrary to expectations no significant change in the discrepancy between self and ideal was found after successful therapy.

However, it was found that the pre-therapy status of the self-ideal discrepancy was prognostic of outcome. On the one hand, the larger the pre-therapy discrepancy between self and ideal, the better the prognosis. On the other hand extreme similarity between self and ideal, which may suggest maladjustment, is concluded to be indicative of a less good prognosis. Taking the improved enuretics as a criterion, it seems that a significant but moderate positive correlation between the self construct and the ideal construct was associated with improvement. As a group the no-treatment control group showed no significant relationship between self and ideal for the experimental period.

For the non-treatment group a small initial discrepancy between self and ideal/....

ideal predicted better spontaneous remission,

It appears that the grid can only identify a symptom once a subject has accepted his symptom. The grid seems to be able to trace this process from non-acceptance to acceptance, and may thus be a useful instrument to guide therapists in this respect during therapy.

This finding supports the finding "that a member of a class does not relate his self-concept at all closely to a stereotype, which he himself uses for that class". (Fransella, 1968; Hudson, 1968; Hoy, 1973).

An alternative conclusion was that initially enuretics did not perceive themselves as enuretics within the testing situation. However, when this status was reinforced by the repeated mentioning of enuresis during therapy they began to see themselves as enuretics. Only at this stage which coincided with the end of therapy did they reflect to a limited degree, their enuretic status in their grid protocols. ( $p < .05$ , one-tailed).

Before and during therapy the grid protocols presented no evidence of either acceptance or denial of the symptoms by the treated group who improved eventually.

The validity of the grid was reflected by the fact that it showed, as can be expected, that at the end of therapy and with the six week follow-up, those who improved most also saw themselves as "least likely to wet their beds".

Denial and acceptance of the symptom showed some relationship with degree of dryness. After therapy those subjects who experienced fewer dry nights were comparatively more inclined to deny their enuretic status, while those subjects who experienced dry nights admitted to enuresis comparatively more. This relationship also held for the non-treatment control group after the control period expired.

Subjects who saw their ideal as dry at the end of therapy were also those who improved most as predicted.

The/.....

The smaller the discrepancy subjects experienced between self-image as an enuretic and ideal self-image as an enuretic, the dryer they were at the end of therapy and the more they improved.

A depth investigation with the grid into the changes between the self construct and all other constructs revealed that the grid was sensitive enough to pick up changes which were understandable in terms of known research. The period over which this investigation was done stretched from the pretherapy to the post-experimental period (T1 to T5).

The grid protocols suggest that no profound changes occurred in the relationship between self and the other constructs. This seems to be in accordance with the view of some researchers that enuresis is not necessarily a symptom of an underlying emotional disturbance. (Lovibond, 1971). Thus it seems reasonable that improvement could take place with few significant concurrent changes within the construct systems of the improved subjects.

The findings, that REP 5 was not affected in its performance by age and intelligence variables, suggest that even in this modified form the grid test has not lost the properties which made the adult forms so robust. Although not many of the hypotheses were supported they provided useful vehicles for the investigating of the main aim. Reasonable evidence was acquired to give some indication of the usefulness and validity of the 5 element rank order repertory grid to assist with diagnosis and prognosis. The investigator was particularly struck by the REP 5's ability to register changes in the subjects construing, which were meaningful in terms of what was known about the subjects and in terms of the present body of knowledge on enuresis research theory or assumed dynamics. The limited scope of this project excluded the possibility of further validation, but it might act as a justification for such research to be undertaken.

From the experience of conducting this project it seems clear that the only conceivable limitations of the REP 5 are those of the design of a

specific/....

specific grid. It may be obvious that the test has to be designed to measure what it intends to measure, before one may even consider validation, but to do this is no easy task. For example, it is not always easy to see that a construct has been formulated in an ambiguous way which makes later interpretation difficult if not impossible.

Thus in the final instance the validity of REP 5, to be used for diagnostic and prognostic purposes, will be limited by

- (i) the skill of the compiler of the grid:
- (ii) the availability of appropriate research information and theory which can be translated in grid terms:
- (iii) the availability of reliable objective criteria against which to measure grid performance.

## APPENDIX A

TABLE 1A

Intercorrelations between constructs for all subjects

Occasion	Treatment		No Treatment
		Average rho <sup>a</sup>	Average rho <sup>a</sup>
Pre-therapy	T1	.64	.70
Mid-therapy	T2	.66	
End-therapy	T3	.67	
6 week follow-up	T4	.68	
6 month follow-up	T5	.68	.73

Note: a Average rho equals square root of average rho squared

Treated, N = 35

No treatment N = 10

TABLE 1B

Intercorrelations between constructs presented separately for primary enuretics (PE) and secondary enuretics (SE)

	Treatment		No Treatment	
	SE	PE	SE	PE
	N = 17	N = 18	N = 5	N = 5
	Average rho <sup>a</sup>	Average rho <sup>a</sup>	Average rho <sup>a</sup>	Average rho <sup>a</sup>
Pre-therapy	.64	.65	.71	.69
Mid-therapy	.70	.65		
End-therapy	.70	.67		
6 week follow-up	.66	.68		
6 month follow-up	.67	.66	.77	.68

ENURESIS RECORDS: MEAN NUMBER OF DRY NIGHTS  
PER WEEK

KEY: E0 refers to pre-treatment baseline enuresis frequency which ranged from 11 to 21 weeks.  
E1 refers to mid-therapy  
E2 refers to end-therapy  
E3 refers to 6 week follow-up  
E4 refers to 6 month follow-up

						<u>TREATED</u>					
Primary Enuretics						Secondary Enuretics					
Subject	E0	E1	E2	E3	E4	Subject	E0	E1	E2	E3	E4
7	5.2	5.7	5.8	6.0	4.8	1	6.2	6.8	6.8	6.8	5.8
8	.9	1.7	1.2	0.7	2.8	2	5.8	6.7	6.7	6.8	5.7
9	.7	3.5	1.7	1.8	1.7	3	1.1	4.5	4.5	4.5	3.3
10	.0	3.0	3.5	4.0	4.7	4	4.9	5.0	5.1	5.5	5.3
11	1.8	3.2	3.5	3.8	3.0	5	3.2	6.7	6.8	7.0	5.5
12	2.3	4.0	4.8	5.7	4.0	6	0.0	2.3	3.3	4.2	4.8
19	2.0	5.0	5.7	6.3	6.7	13	2.2	4.2	4.8	5.3	6.0
20	0.8	2.3	2.2	2.0	5.5	14	5.0	5.3	5.9	6.5	6.3
21	2.4	5.3	5.8	6.3	4.0	15	1.3	5.0	5.6	6.2	5.0
22	1.1	5.0	4.1	3.2	4.7	16	6.7	7.0	7.0	7.0	6.5
23	0.0	4.7	5.1	5.5	6.8	17	2.0	4.8	5.5	6.2	2.7
24	0.0	1.7	0.4	0.2	0.0	18	1.0	2.8	1.9	1.0	1.3
31	5.4	4.5	4.8	5.0	6.2	25	3.6	6.7	6.9	7.0	6.8
32	1.3	3.0	2.2	1.3	6.3	26	6.2	6.2	6.6	7.0	7.0
33	0	0.5	0.3	0.0	0.0	27	6.5	6.8	6.9	7.0	7.0
34	1.3	2.3	2.5	2.7	2.5	28	2.9	5.8	6.0	6.2	3.0
35	4.5	7.0	7.0	7.0	6.8	29	5.2	5.5	5.7	5.8	6.3
36	0.9	1.7	1.5	1.2	2.0	30	6.7	6.8	6.8	6.8	6.8

						<u>NO TREATMENT</u>					
Primary Enuretics						Secondary Enuretics					
43	0.9				3.0	37	1.5				1.7
44	4.9				6.0	38	4.8				3.0
45	1.7				1.8	39	1.5				2.5
46	0.5				0.7	40	6.5				5.8
49	0.0				0.0	41	0.9				5.5
48	0.0				0.2	42	1.6				4.0

APPENDIX ATABLE DTHE "C.P.Q." FACTOR BTREATED GROUP

Primary Enuretics		Secondary Enuretics	
Subject	Factor B	Subject	Factor B
7	8	1	7
8	8	2	7
9	5	3	3
10	6	4	5
11	5	5	3
12	5	6	4
19	8	13	9
20	7	14	8
21	5	15	4
22	3	16	7
23	5	17	6
24	4	18	5
31	7	25	7
32	6	26	10
33	5	27	8
34	10	28	3
35	9	29	4
36	5	30	4

NO TREATMENT GROUP

43	7	37	7
44	6	38	9
45	9	39	2
46	2	40	7
49	3	41	8
48	5	42	1



APPENDIX BSIMPLIFIED REPERTORY GRID FORM

Name:

Age:

Sex:

Case No.

Date:

School:

Sheet No.

Gets on well with Mother						Gets on less well with Mother
Gets on well with Father						Gets on less well with Father
Gets cross easily						Does not get cross easily
Is worried						Is not worried
Happy						Unhappy
Is liked by other children and has many friends						Is not liked by other children and has few friends
Gives up easily						Does not give up easily
Thinks he can do better						Thinks that he can't do better
Will be worried being away from father and mother						Would be least worried being away from mother and father
Is like myself as I am						Is least like myself
Is as I would like to be						Is as I would not like to be
Is most likely to wet his bed						Is least likely to wet his bed

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